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SOUTHWEST FISHERIES SCIENCE CENTER

NATIONAL MARINE FISHERIES SERVICE

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P.O. BOX 271

LA JOLLA, CA 92038

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1979-1980 TUNA/PORPOISE DATA EDITING CRITERIA FOR RANGE, BLANKNESS, AND LOGICAL ERROR STATEMENTS: PORPOISE DATA MANAGEMENT SYSTEM

By

Charles W. Oliver

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Honolulu, Hawaii

ADMINISTRATIVE REPORT LJ-91-06

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1979-1980 Tuna/Porpoise Data Editing Criteria for
Range, Blankness, and Logical Error Statements:
Porpoise Data Management System

Charles W. Oliver

Southwest Fisheries Science Center
National Marine Fisheries Service
La Jolla, California 92038

INTRODUCTION

The purpose of this document is to present the quality control criteria applied to specific data formats using computer programs. Data were primarily collected by observers placed aboard U.S. tuna purse-seine vessels operating in the eastern tropical Pacific during calendar years 1979 and 1980. These observers, employed by either the National Marine Fisheries Service (NMFS) or the Inter-American Tropical Tuna Commission (IATTC), were provided with field manuals^{1,2,3,4} containing data collection forms and instructions. Other data were collected by vessel captains (Oliver 1991a) and by researchers who conducted an aerial survey during 1979 (Jackson 1980; Oliver 1983). Quality control criteria were generally applied during the calendar year of collection, although some of these data were subjected to additional editing in subsequent years. Cross-database editing programs were executed during 1980-1981, and Porpoise Life History data were reviewed in 1978, 1981, 1984 and 1986 (Oliver 1991b). These data formats, editing specifications, and computer programs were part of the Porpoise Data Management System maintained during 1979-1980 by the Porpoise Data Management Group (PDMG) at the Southwest Fisheries Science Center (SWFSC), La Jolla, California, 92038. The management of NMFS data is currently performed by the Multispecies Data Collection and Evaluation Program at the SWFSC. The IATTC maintains its own data management group.

This document describes the editing specifications (range, character, blankness, and logical error statements) applicable to data collected during both 1979 and 1980 using data forms available during each year. With the exception of Porpoise Life-History data (Oliver 1991b), augmented with data collected by IATTC observers, all data were collected by the NMFS. Although the appearance of some data forms are different between years (e.g., 1979 and 1980 Porpoise Set Log and Tally forms) the data formats and editing criteria presented here were essentially identical. Yearly exceptions to specific editing criteria are noted. Data related to a logical record (e.g., Fishing Mode; Cruise Specification; or Porpoise Set) are identified by the sequential number of the physical record (1,2,...n) which define a logical record, and the 80-column numbers for a variable (e.g. 1.01-1.04 or 14.23-14.35). Logical records can be defined by a single physical record (e.g., Fishing Mode), or multiple physical records (e.g., 3 records for Cruise Specifications and 14 records for Porpoise Sets).

BACKGROUND

Data on the incidental kill of dolphins in the purse-seine fishery for tuna in the eastern tropical Pacific have been collected since at least 1966 (Perrin 1969). In late 1971, the National Marine Fisheries Service (NMFS) began fielding observers aboard U.S. vessels specifically to gather research data on this problem. With the passage of the Marine Mammal Protection Act (MMPA) in 1972, NMFS increased the level of data collection for this fishery, with over one hundred and twenty fishing trips observed during 1977. The increased level of effort resulted in a need to automate the processing and archival of data collected by the NMFS observer program and other data resulting from amendments to the MMPA. In 1973 the PDMG was formed to meet this need. The PDMG developed coding instructions, coding formats, manual and computer editing criteria, and computer archival formats for data collected by the observer program.

The NMFS observer program was operated by the SWFSC prior to 1976, and the SWFSC continued to field "gear technicians" to collect specific data on tuna vessel gear and equipment modifications during the period 1976-1980. Beginning in 1976, the NMFS observer program was operated by the NMFS Southwest Regional (SWR) Office based in Terminal Island, California through a branch office in San Diego, California. The IATTC observer program began in 1979. Both NMFS and IATTC observers were provided with field manuals^{1,2,3,4}, trained, fielded aboard U.S. tuna purse-seine vessels, debriefed upon return and either placed aboard another vessel, assigned other projects, or released. While at sea, observers collected a variety of data including information on the numbers and species of dolphins seen and set on, data on the gear operations, compliance with existing government regulations governing fishing on dolphins, and data on temporal, spatial, and environmental conditions as they relate to dolphin populations. The NMFS observer program provided the majority of data maintained by the PDMG. Porpoise life-history data collected by IATTC observers were provided to the PDMG for editing and archival (Oliver 1991b). Additional data were collected by research vessels and aircraft operated by the SWFSC. Data from these sources were also processed by the PDMG.

The development of both manual and computer-assisted methods for identifying potential errors in these data resulted from a continuing desire for quality control, an increase in the number of data elements, the number of forms, the number of observed trips, and the realization of the capacity of computers to reduce tedious manual checks. Manual procedures involving visual perusal of the data collection forms which identified "error" were performed by both the observer who collected these data, and one or more members of the tuna/porpoise program staff. Once the data were archived, additional "errors" were sometimes identified by various researchers during analyses. Both types of error identifications were reconciled by experienced observers (data editors), using all available data sources and a knowledge of the fishery. Any changes to original data entries were added to the

original data forms and to the appropriate computer coded datafile(s). Records of these post-archival corrections were maintained by the PDMG within a "Changes Book" organized by calendar year. These records identify the variable value, the corrected value and the date the correction was posted.

Data collected by observers and others were transcribed, coded, keypunched, and then entered onto a computer. The computer files were then used as input to computer edit programs which identified potential errors in the data. These programs ascertain if 1) variable values were greater than, or less than, an acceptable value (Range and Character checks), 2) variable values were missing when they should be present (Blank checks), and 3) combinations of the values of variables did not meet some criteria (Logical Error checks). The PDMG subsequently developed a series of procedures and programs to edit a variety of data. Separate edit programs were developed for each data form and calendar year, although in many years they performed essentially the same editing criteria if the data form was unchanged. These programs reduced the amount of time needed for a data editor to perform the checks, and thus reduced the time for data to be archived, while providing specified quality control. In 1977, we began a project to produce a package of structured, documented programs which could be easily modified. This project was successfully completed in 1978, and implemented for use on the 1979 data. These programs have been used to develop edit programs for much of the historical data. Cross-database editing programs were developed and executed during 1980-1981 on some of these archived databases. The purpose of these edits was to assess certain relationships between data formats (e.g. positions, times, events) between related databases (Porpoise Set Log, Marine Mammal Sightings and Effort, and Fishing Mode), prior to analyses of these databases (Polacheck 1983, 1984).

Edit programs were first developed during late 1974 for the 1975 Cruise Specifications, Vessel Specifications, Marine Mammal Watch Daily Effort, Marine Mammal Watch Sightings, Vessel Activities, Set Log, Captain's Bridge Log data, and for the 1974 Set Log data. The 1974 Marine Mammal Watch Daily Effort and Marine Mammal Watch Sightings data were reformatted to the 1975 format using computer programs and manual transcription procedure. These data was subsequently edited using the 1975 edit program. The edit programs were written in the FORTRAN language, and executed on the keypunched ASCII-data prior to archival as a database. There were four basic functions to each edit: 1) are the data cards in the proper sequence?, 2) Is there a value for a variable where "blankness" is unacceptable?, 3) Is the variable's value within an acceptable range of values?, and 4) Does the value of a variable, in conjunction with those of other variables, meet a pre-defined criterion? We referred to these functions as "sequence checks", "blankness checks", "range checks", and "logical checks", respectively. Sequence, blankness, and range checks were performed to identify "field errors". Logical checks identified "logical errors" involving more than one field or variable. The edit programs subject data to each of these

functions and produce an "error report" listing on paper identifying the records and variables which failed the criteria. These listings are reviewed by experienced observers (data editors) along with the original data, corrections made when appropriate, and the process repeated until the data are accepted for archival.

The data verification criteria used in the the editing process (range, blank, and logical-errors) are generally not absolute. We use the term "errors" to include data that is incorrect (e.g., month values greater than 12), but also to identify potential problems. These latter "errors" are not necessarily incorrect data but when identified, caused the data editors to review the both the original and coded data. The "error" criteria were defined by researchers, the SWR, and the PDMG based upon their experience with these data sources. Data editors then investigated these errors using the original data forms submitted by the observer, additional coded data (e.g., code tables), a listing of the computer file, the output from the computer edit program, and data editor instructions, coding formats, etc. Corrections were made, if necessary, and the cycle repeated until the data editor determined the data were acceptable based upon the established quality control criteria. The data were then archived and available for use by researchers.

For some variables the editing criteria were inviolate (e.g., the value of the YEAR variable must be 75 for data collected during 1975). Values beyond the established range or blank criteria are not necessarily in error. Thus, a value for the variable TOTAL PORPOISE KILLED which exceeds the established criteria of 100 animals used during 1975-1984 may be valid, although the edit criteria would cause the data editors to review the original data to verify the entry. Thus, a user should not assume that values will always be within the range or blank criteria, although for most records this will be the case. In contrast, logical-error criteria are generally inviolate, except for cases where data were not recorded.

Researchers are often interested in knowing if a variable was not collected on a particular logical record although the occurrence of "missing data" may, or may not, affect the analysis. Variables for which a zero value has meaning present a special problem (e.g., Latitude Degrees, Total Number of Dolphins Killed). The PDMG used "-1" or "9" to identify "missing data" for variables (9 for single byte variables, and -1 for multi-byte variables) during the early 1970s because the FORTRAN compiler used to access these data interpreted both blank and zero values as zeroes for numeric variables. Observers and data editors were thus required to enter these "missing data" values for each variable, and this requirement increased the physical size of the computer files. Beginning in late 1974, the PDMG began archiving data on a computer system provided by Computer Sciences Corporation. The data management languages used on this computer system (DML and ALADIN) allowed unrecorded numeric variables (blanks) to be stored as "null or less than zero" with a

considerable reduction in the physical size of the computer files. The PDMG group instructed observers and data editors to not code variables for which a value was "missing", and transcribed existing "-1" and "9" values to blanks. Thus, a researcher could test a numeric variable for a "less than zero" value to determine if the value was recorded. The reasons we took advantage of this capability were to reduce the amount of data entry, reduce the size of the computer files, and to make it easier to review the data while retaining the ability to identify "missing data" during editing and analysis.

In 1981, the PDMG was instructed to transfer the archived data to another computer system which did not easily support a "null" capability. A decision was made not to transcribe the existing "missing data" values (blanks) to a "-1" or "9" value. Thus, a researcher must now interpret the character representation of a variable (blank value), and not a numeric representation (blank and zero the same) if a "missing data" value is important to the analysis.

The computer programs used to identify range, blank, and logical "errors" during 1979-1980 also updated a database used to count the frequencies with which errors occurred each time an edit program was executed. This "Error Count Database" provided some insight to the database variables. The PDMG used these frequencies to identify variables which 1) might have range criteria that were too stringent or too loose, 2) required better definitions or more explicit codes, 3) required more emphasis during observer training, and 4) may pose problems during analysis. Error count databases (e.g., EC80DB for 1980 data) were archived at the SWFSC.

During early 1981, when all of the 1980 NMFS observer data had been edited and archived, the tally totals from the 1980 error count database (EC80DB) were retrieved. Totals are presented by data type (e.g., Bridge Log) and data subtype if appropriate (e.g., Non-Porpoise and Porpoise Set Logs) in order of sequence for each of the four error types: 1) B for BLANK errors, 2) C for CHARACTER errors, 3) L for LOGICAL errors, and 4) R for RANGE errors. An explanation of these error types is provided in Oliver and Butler (1991). These totals represent, in some cases, multiple executions of an edit program on a single set of data (e.g., Cruise Specifications data from a single cruise). Thus, the error counts are additive if, for example, an "error" was counted during one edit run, not corrected, and counted again during a subsequent edit run. Generally, data are subjected to no more than two or three edit runs before the data are archived. However, not all "errors" can be corrected, and some familiarity and interpretation of the meaning of a particular "error" is required if the tally totals are to be useful.

ACKNOWLEDGEMENTS

A great many people were involved with the various aspects of developing and maintaining the data management system, quality control criteria, and the data collected by the NMFS observer program. I thank Robert Butler and Frank Ralston who assisted in the development of the data management concept and system. Robert developed the programming concept for most of the common subroutines and main edit programs which allowed us to keep up with the increasing amount of data we processed. Frank served as the senior data editor 1976-1982 and ensured that the quality control aids and procedures were implemented. During the 1980s, Al Jackson, Rand Rasmussen, and Mike Trianni (Multispecies Data Collection and Evaluation Program) have directed the maintenance of the historical databases. Helpful review comments were received from Al Jackson, Rand Rasmussen, and Frank Ralston (SWFSC).

FOOTNOTES and REFERENCES

- 1 1979 Tuna/Porpoise Observer Field Manual. National Marine Fisheries Service. 1520 State Street, Suite 200, San Diego, CA 92101.
 - 2 1980 Tuna/Porpoise Observer Field Manual. National Marine Fisheries Service. 1520 State Street, Suite 200, San Diego, CA 92101.
 - 3 1979 Inter-American Tropical Tuna Commission Tuna-Dolphin Investigation Field Manual. Edited by David Bratten, Inter-American Tropical Tuna Commission. c/o Scripps Institution of Oceanography, La Jolla, CA 92093.
 - 4 1980 Inter-American Tropical Tuna Commission Tuna-Dolphin Investigation Field Manual. Edited by David Bratten, Inter-American Tropical Tuna Commission. c/o Scripps Institution of Oceanography, La Jolla, CA 92093.
- Jackson, T.D. 1980. Trip report: Porpoise population aerial survey of the eastern tropical Pacific ocean, January 22-April 25, 1979. Southwest Fisheries Center Admin. Rept. No. LJ-80-01. 74 p.
- Oliver, C.W. 1983. Documentation of aerial survey sighting and transect forms for the 1977 and 1979 eastern tropical Pacific cetacean surveys. Southwest Fisheries Science Center Admin. Rept. No. LJ-83-20. 35 p.
- Oliver, C.W. 1991a. Documentation of the 1975-1984 Marine Mammal Bridge Log Record Data: Porpoise Data Management System. Southwest Fisheries Science Center Admin. Rept. No. LJ-91-04. 95 p.
- Oliver, C.W. 1991b. Documentation of the 1959-1988 editing criteria for porpoise life-history data: Porpoise Data Management System. Southwest Fisheries Science Center Admin. Rept. No. LJ-91-07. 86 p.
- Oliver, C.W. and R.L. Butler. 1991. Documentation of the 1980 data verification programs and common subroutines for fixed-format data: Porpoise Data Management System. NOAA-TM-NMFS-SWFSC-157. 69 p.
- Polacheck, T. 1983. The relative abundance of dolphins in the eastern tropical Pacific based on encounter rates with tuna purse seiners. PhD. thesis, Univ. of Oregon, Eugene, OR. 444 p.
- Polacheck, T. 1984. Documentation of the time sequential file created from the observer databases for analyzing of relative abundances (sic). Southwest Fisheries Science Center Admin. Rept. No. LJ-84-33. 26 p.

1979 Aerial Survey Transect and Sightings Data.

FLIGHT: _____ LEG: _____ DATE: _____

FROM: _____ TO: _____

OBSERVER CODES

REASON
FOR
POSITION

1. Begin Leg
2. Track Check
3. Divert
4. Overschool
5. Return
6. End Leg

[illegible][illegible]

1979 AERIAL SURVEY SIGHTING RECORD

DATE			OBSERVER CODES							
SIGHTING NO.	FLIGHT NO.	LEG NO.	CARD NO.	YR	MO	DAY	BOW	LEFT WAIST	RIGHT WAIST	RECORD-ER
1	4	6	8	9	11	13	15	17	19	21

GMT			

OBSERVER CODES
 1. BARHAM
 2. CHARTER
 3. COE
 4. JACKSON
 5. LEATHERWOOD
 6. OLIVER
 7. POWERS
 8. WALKER
 9. PERRYMAN
 10. HOLT

CLOCK POSITION OF SUN		SEA SURF. TEMP. (*F + TENTHS)	BEAUFORT NO.	SIGHT BY WHOM
HORIZ	VERT			

DISTANCE DETERMINED (N.M.)		POSITION OF SCHOOL					
1. GNS	2. ESTIMATED	LATITUDE DEG	MIN.	N S	LONGITUDE DEG	MIN.	E W
33	36	37	39	41	42	45	47

SCHOOL SIZE ESTIMATES			
OBS. CODE	BEST	HIGHEST	LOWEST
48	50	54	58

SPECIES		
%	CODE	NAME
(1)	62	65

SIGHTING NO.	CARD NO.
1	2

SPECIES		
%	CODE	NAME
(2)	19	22

SCHOOL SIZE ESTIMATES			
OBS. CODE	BEST	HIGHEST	LOWEST
24	26	30	34

SPECIES		
%	CODE	NAME
(3)	38	41

SCHOOL SIZE ESTIMATES			
OBS. CODE	BEST	HIGHEST	LOWEST
43	45	49	53

SPECIES		
%	CODE	NAME
(4)	57	60

SCHOOL SIZE ESTIMATES			
OBS. CODE	BEST	HIGHEST	LOWEST
62	64	68	72

SPECIES		
%	CODE	NAME
(5)	76	79

SIGHTING NO.	CARD NO.
1	3

PORPOISE	BIRDS	TUNA
19	20	21

ALTITUDE 9" PHOTOS		70 mm CAMERA			9" CAMERA			35 mm CAMERA		
ROLL NO.	1st. FRAME	LAST FRAME	ROLL NO.	1st. FRAME	LAST FRAME	ROLL NO.	1st. FRAME	LAST FRAME		
22	26	27	30	33	36	39	42	45		

26-SCHOOL MODE AT TIME OF 9" PHOTOS
 1. TRAVELING
 2. RESTING
 3. FEEDING

Y N	WAS PLANE IN SEARCH MODE

1979 Aerial Survey Transect Data (1979 format): BLANK, RANGE,
and LOGICAL error criteria

1979 AERIAL TRANSECT FORM
Data Element Blankness and Range Editing Specifications
Record 1 of 1

Data Element	Columns	Character type	Blankness OK?	Range Lower Upper	
Flight	4-5	N	No	1	20
Leg	6-7	N	No	1	25
Year	8-9	N	No	79	79
Month	10-11	N	No	1	4
Day	12-13	N	No	1	31
Altitude	14-17	N	No	850	1100
Ground speed	18-20	N	Yes	85	140
Bow obs code	21-22	N	No	4	11
Left obs code	25-26	N	No	4	11
Right obs code	27-28	N	No	4	11
Recorder code	29-30	N	No	4	11
Horizontal sun	31-32	N	Yes	1	12
Vertical sun	33-34	N	Yes	1	12
Beaufort	35	N	No	1	5
LATD (Latitude Degs)	36-37	N	No	0	28
Latitude minutes (no 10ths)	38-39	N	No	0	59
Latitude minutes to 10ths	40	N	No	0	9
N or S (Hemisphere)	41	N	No	1	2
LONGD (Longitude Degs)	42-44	N	No	78	113
Longitude minutes (no 10ths)	45-46	N	No	0	59
Longitude minutes to 10ths	47	N	No	0	9
E or W (Hemisphere)	48	N	No	2	2
Greenwich time	49-52	N	No	0	2359
GMT to 10ths	53	N	No	0	9
Reason position	54	N	No	1	6
Searching	55	N	No	1	2
Sighting number	56-58	N	Yes	1	387

A = ALPHA

B = BLANK

C = COMMA

N = NUMERIC

FOR ASEDIT79TL

ERROR001 IF THE REASON FOR THE POSITION IS TO DIVERT (1.54=3)
... THEN THE PLANE MUST NOT BE SEARCHING-(1.55) MUST
BE EQUAL TO 2.

ERROR002 IF THE REASON FOR THE POSITION IS RETURN TO TRACK
(1.54=5) THEN THE PLANE MUST BE SEARCHING...(1.55)
MUST BE EQUAL TO 1.

ERROR003 IF THE REASON FOR THE POSITION IS END LEG (1.54=6),
THEN THE PLANE MUST BE SEARCHING... (1.55) MUST BE
EQUAL TO 1.

ERROR004 IF THE REASON FOR THE POSITION IS BEGIN LEG (1.54=1),
THEN THE PLANE MUST BE SEARCHING... (1.55) MUST BE
EQUAL TO 1.

ERROR005 IF THE REASON FOR THE POSITION IS TRACK CHECK
(1.54=2), THEN THE PLANE SHOULD BE SEARCHING
... (1.55) MUST BE EQUAL TO 1.

ERROR006 THE VERTICAL SUN POSITION (1.33) MUST NOT BE EQUAL
TO ANY VALUE 04 THRU 11.

ERROR007 IF THE FLIGHT # (1.04) IS 01 AND THE BOW OBSERVER
(1.21) IS 10... THEN THE OTHER OBSERVERS (1.25, 1.27,
1.29) MUST EQUAL 080506.

ERROR008 IF THE FLIGHT # (1.04) IS 01 AND THE BOW OBSERVER
(1.21) IS 04... THEN THE OTHER OBSERVERS (1.25, 1.27,
1.29) MUST EQUAL 060910.

ERROR009 IF THE FLIGHT # (1.04) IS 01 AND THE BOW OBSERVER
(1.21) IS 05... THEN THE OTHER OBSERVERS (1.25, 1.27,
1.29) MUST EQUAL 100804.

ERROR010 IF THE FLIGHT # (1.04) IS 01 AND THE BOW OBSERVER
(1.21) IS 09... THEN THE OTHER OBSERVERS (1.25, 1.27,
1.29) MUST EQUAL 040605.

ERROR011 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.21) IS 10... THEN THE OTHER OBSERVERS
(1.25, 1.27, 1.29) MUST EQUAL 050609.

ERROR012 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.21) IS 06... THEN THE OTHER OBSERVERS
(1.25, 1.27, 1.29) MUST EQUAL 100508.

ERROR013 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.21) IS 04... THEN THE OTHER OBSERVERS
(1.25, 1.27, 1.29) MUST EQUAL 080906.

ERROR014 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.21) IS 09... THEN THE OTHER OBSERVERS
(1.25, 1.27, 1.29) MUST EQUAL 040805.

ERROR015 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.21) IS 08... THEN THE OTHER OBSERVERS
(1.25, 1.27, 1.29) MUST EQUAL 090410.

ERROR016 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.21) IS 05... THEN THE OTHER OBSERVERS
(1.25, 1.27, 1.29) MUST EQUAL 061004.

ERROR017 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
OBSERVER (1.21) IS 10... THEN THE OTHER OBSERVERS
(1.25, 1.27, 1.29) MUST EQUAL 041109.

ERROR018 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
OBSERVER (1.21) IS 06... THEN THE OTHER OBSERVERS
(1.25, 1.27, 1.29) MUST EQUAL 090410.

ERROR019 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
 OBSERVER (1.21) IS 11... THEN THE OTHER OBSERVERS
 (1.25, 1.27, 1.29) MUST EQUAL 100906.

ERROR020 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
 OBSERVER (1.21) IS 04... THEN THE OTHER OBSERVERS
 (1.25, 1.27, 1.29) MUST EQUAL 061011.

ERROR021 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
 OBSERVER (1.21) IS 09... THEN THE OTHER OBSERVERS
 (1.25, 1.27, 1.29) MUST EQUAL 110604.

ERROR022 IF THE CURRENT SIGHTING # (1.56) IS NON BLANK ...THEN
 THE CURRENT SIGHTING # MUST BE EQUAL TO THE LAST
 NON BLANK SIGHTING # PLUS 1.

ERROR023 IF THE CURRENT SIGHTING # (1.56) IS NON BLANK ...THEN
 THE CURRENT REASON FOR POSITION(1.54) SHOULD NOT
 GENERALLY BE EQUAL TO 1, 5, OR 6.

ERROR301 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04)...THE CURRENT LEG #(1.06) MUST BE
 EQUAL TO THE PREVIOUS LEG # OR THE PREVIOUS LEG #

ERROR302 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04)...THE CURRENT DATE (1.08) MUST BE
 EQUAL TO THE PREVIOUS DATE.

ERROR303 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04)...THE CURRENT TIME (1.49-1.53) MUST BE
 GREATER THAN THE PREVIOUS TIME.

ERROR304 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04)...THE CURRENT LAT MINUTES (1.38-1.39)
 MUST BE WITHIN 20 MINUTES OF THE PREVIOUS LAT MINUTES.

ERROR305 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04)...THE CURRENT LONG MINUTES(1.45-1.46)
 MUST BE WITHIN 20 MINUTES OF THE PREVIOUS LONG MINUTES

ERROR306 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04)...THE CURRENT LAT DEG(1.36-1.37)
 MUST BE WITHIN 1 DEG OF THE PREVIOUS LAT DEG.

ERROR307 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04)...THE CURRENT LONG DEG(1.42-1.44)
 MUST BE WITHIN 1 DEG OF THE PREVIOUS LONG DEG.

ERROR308 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04) AND THE CURRENT REASON FOR POSITION
 (1.54) IS EQUAL TO 1, 3, 5, OR 6,... THEN THE
 PREVIOUS REASON FOR POSITION MUST NOT EQUAL THE
 CURRENT REASON FOR POSITION.

ERROR309 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04) AND THE PREVIOUS REASON FOR POSITION
 (1.54) EQUALS 3 ... THEN THE CURRENT REASON FOR
 POSITION MUST EQUAL 4 OR 5.

ERROR310 IF THE CURRENT FLIGHT #(1.04) IS EQUAL TO THE PREVIOUS
 FLIGHT #(1.04) AND THE PREVIOUS REASON FOR POSITION
 (1.54) EQUALS 3 AND THE CURRENT REASON FOR POSITION
 IS 4... THEN THE PLANE MUST NOT BE SEARCHING ...
 (1.55) MUST EQUAL 2.

1979 Aerial Survey Sightings Data (1979 format): BLANK, RANGE,
and LOGICAL error criteria

1979 AERIAL SIGHTING FORM
Data Element Blankness and Range Editing Specifications
Record 1 of 3

Data Element	Columns	Character type	Blankness OK?	Range	
				Lower	Upper
Sight	1-3	N	No	1	387
Flight	4-5	N	No	1	20
Leg	6-7	N	No	1	25
Year	9-10	N	No	79	79
Month	11-12	N	No	1	4
Day	13-14	N	No	1	31
Bow obs code	15-16	N	No	4	10
Left obs code	17-18	N	No	4	10
Right obs code	19-20	N	No	4	10
Recorder code	21-22	N	No	4	10
Horizontal sun	23-24	N	Yes	1	12
Vertical sun	25-26	N	Yes	1	12
Sea surface temp	27-28	N	Yes	75	84
Sea surface temp to 10ths	29	N	Yes	0	9
Beaufort	30	N	No	1	5
Sighter	31-32	N	No	4	10
Perpendicular	33-34	N	Yes	0	1
Perpendicular distance to 10ths	35	N	Yes	0	9
Determined how	36	N	Yes	1	3
LATD	37-38	N	No	0	28
LATM	39-40	N	No	0	59
N or S (Hemisphere)	41	N	No	1	2
LONGD	42-44	N	No	78	113
LONGM	45-46	N	No	0	59
E or W (Hemisphere)	47	N	No	2	2
E1 obs code	48-49	N	No	4	10
E1 best est	50-53	N	Yes	1	500
E1 highest est	54-57	N	Yes	1	1000
E1 lowest est	58-61	N	Yes	1	400
SP1 percent tot	62-64	N	No	50	100
SP1 code	65-66	N	No	2	79

A = ALPHA

B = BLANK

C = COMMA

N = NUMERIC

1979 AERIAL SIGHTING FORM
Data Element Blankness and Range Editing Specifications
Record 2 of 3

Data Element	Columns	Character type	Blankness OK?	Range	
				Lower	Upper
Sight	1-3	N	No	1	387
E2 obs code	5-6	N	Yes	4	10
E2 best est	7-10	N	Yes	1	500
E2 highest est	11-14	N	Yes	1	1000
E2 lowest est	15-18	N	Yes	1	400
SP2 percent tot	19-21	N	Yes	1	50
SP2 code	22-23	N	Yes	2	79
E3 obs code	24-25	N	Yes	4	10
E3 best est	26-29	N	Yes	1	500
E3 highest est	30-33	N	Yes	1	1000
E3 lowest est	34-37	N	Yes	1	400
SP3 percent tot	38-40	N	Yes	1	25
SP3 code	41-42	N	Yes	2	79
E4 obs code	43-44	N	Yes	4	10
E4 best est	45-48	N	Yes	1	500
E4 highest est	49-52	N	Yes	1	1000
E4 lowest est	53-56	N	Yes	1	400
SP4 percent tot	57-59	N	Yes	1	25
SP4 code	60-61	N	Yes	2	79
E5 obs code	62-63	N	Yes	4	10
E5 best est	64-67	N	Yes	1	500
E5 highest est	68-71	N	Yes	1	1000
E5 lowest est	72-75	N	Yes	1	400
SP5 percent tot	76-78	N	Yes	1	25
SP5 code	79-80	N	Yes	2	79

A = ALPHA

B = BLANK

C = COMMA

N = NUMERIC

1979 AERIAL SIGHTING FORM
Data Element Blankness and Range Editing Specifications
Record 3 of 3

Data Element	Columns	Character type	Blankness OK?	Range	
				Lower	Upper
Sight	1-3	N	No	1	387
E6 obs code	5-6	N	Yes	4	10
E6 best est	7-10	N	Yes	1	500
E6 highest est	11-14	N	Yes	1	1000
E6 lowest est	15-18	N	Yes	1	400
Porpoise (Y/N)	19	N	No	1	2
Birds (Y/N)	20	N	No	1	2
Tuna (Y/N)	21	N	No	1	2
Inch 9 flyover (altitude)	22-25	N	Yes	600	1200
School mode	26	N	Yes	1	3
Roll num 70M1	27-29	N	Yes	1	22
First frame 70M1	30-32	N	Yes	1	11
Last frame 70M1	33-35	N	Yes	2	12
Roll num 9 in	36-38	N	Yes	1	4
First frame 9 in	39-41	N	Yes	1	400
Last frame 9 in	42-44	N	Yes	1	400
Roll num 35M	45-47	N	Yes	1	5
First frame 35M	48-50	N	Yes	1	35
Last frame 35M	51-53	N	Yes	2	36
Good bad ugly	54	N	No	1	2
Roll num 70M2	55-57	N	Yes	1	22
First frame 70M2	58-60	N	Yes	1	11
Last frame 70M2	61-63	N	Yes	2	12

A = ALPHA

B = BLANK

C = COMMA

N = NUMERIC

FOR ASEDIT79SL

ERROR101 THE VERTICAL SUN POSITION (1.25) MUST NOT BE EQUAL
TO ANY VALUE 04 THRU 11.

ERROR102 IF THE FLIGHT # (1.04) IS 01 AND THE BOW OBSERVER
(1.15) IS 10... THEN THE OTHER OBSERVERS (1.17, 1.19,
1.21) MUST EQUAL 080506.

ERROR103 IF THE FLIGHT # (1.04) IS 01 AND THE RECORDER (1.21)
IS 06... THEN WHO MADE THE SIGHTING (1.31) SHOULD BE
EQUAL TO 10 OR 08 OR 05.

ERROR104 IF THE FLIGHT # (1.04) IS 01 AND THE BOW OBSERVER
(1.15) IS 04... THEN THE OTHER OBSERVERS (1.17, 1.19,
1.21) MUST EQUAL 060910.

ERROR105 IF THE FLIGHT # (1.04) IS 01 AND THE RECORDER (1.21)
IS 10... THEN WHO MADE THE SIGHTING (1.31) SHOULD BE
EQUAL TO 04 OR 06 OR 09.

ERROR106 IF THE FLIGHT # (1.04) IS 01 AND THE BOW OBSERVER
(1.15) IS 05... THEN THE OTHER OBSERVERS (1.17, 1.19,
1.21) MUST EQUAL 100804.

ERROR107 IF THE FLIGHT # (1.04) IS 01 AND THE RECORDER (1.21)
IS 04... THEN WHO MADE THE SIGHTING (1.31) SHOULD BE
EQUAL TO 04 OR 06 OR 09.

ERROR108 IF THE FLIGHT # (1.04) IS 01 AND THE BOW OBSERVER
(1.15) IS 09... THEN THE OTHER OBSERVERS (1.17, 1.19,
1.21) MUST EQUAL 040605.

ERROR109 IF THE FLIGHT # (1.04) IS 01 AND THE RECORDER (1.21)
IS 05... THEN WHO MADE THE SIGHTING (1.31) SHOULD BE
EQUAL TO 09 OR 04 OR 06.

ERROR110 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.15) IS 10... THEN THE OTHER OBSERVERS
(1.17, 1.19, 1.21) MUST EQUAL 050609.

ERROR111 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE RECORDER
(1.21) IS 09... THEN WHO MADE THE SIGHTING (1.31)
SHOULD BE EQUAL TO 10 OR 05 OR 06.

ERROR112 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.15) IS 06... THEN THE OTHER OBSERVERS
(1.17, 1.19, 1.21) MUST EQUAL 100508.

ERROR113 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE RECORDER
(1.21) IS 08... THEN WHO MADE THE SIGHTING (1.31)
SHOULD BE EQUAL TO 06 OR 10 OR 05.

ERROR114 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.15) IS 04... THEN THE OTHER OBSERVERS
(1.17, 1.19, 1.21) MUST EQUAL 080906.

ERROR115 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE RECORDER
(1.21) IS 06... THEN WHO MADE THE SIGHTING (1.31)
SHOULD BE EQUAL TO 04 OR 08 OR 09.

ERROR116 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.15) IS 09... THEN THE OTHER OBSERVERS
(1.17, 1.19, 1.21) MUST EQUAL 040805.

ERROR117 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE RECORDER
(1.21) IS 05... THEN WHO MADE THE SIGHTING (1.31)
SHOULD BE EQUAL TO 09 OR 04 OR 08.

ERROR118 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
OBSERVER (1.15) IS 08... THEN THE OTHER OBSERVERS
(1.17, 1.19, 1.21) MUST EQUAL 090410.

ERROR119 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE RECORDER
 (1.21) IS 10... THEN WHO MADE THE SIGHTING (1.31)
 SHOULD BE EQUAL TO 08 OR 09 OR 04.

ERROR120 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE BOW
 OBSERVER (1.15) IS 05... THEN THE OTHER OBSERVERS
 (1.17, 1.19, 1.21) MUST EQUAL 061004.

ERROR121 IF THE FLIGHT # (1.04) IS 02 THRU 17 AND THE RECORDER
 (1.21) IS 04... THEN WHO MADE THE SIGHTING (1.31)
 SHOULD BE EQUAL TO 05 OR 06 OR 10.

ERROR122 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
 OBSERVER (1.15) IS 10... THEN THE OTHER OBSERVERS
 (1.17, 1.19, 1.21) MUST EQUAL 041109.

ERROR123 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE RECORDER
 (1.21) IS 09... THEN WHO MADE THE SIGHTING (1.31)
 SHOULD BE EQUAL TO 10 OR 04 OR 11.

ERROR124 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
 OBSERVER (1.15) IS 06... THEN THE OTHER OBSERVERS
 (1.17, 1.19, 1.21) MUST EQUAL 090410.

ERROR125 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE RECORDER
 (1.21) IS 10... THEN WHO MADE THE SIGHTING (1.31)
 SHOULD BE EQUAL TO 06 OR 09 OR 04.

ERROR126 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
 OBSERVER (1.15) IS 11... THEN THE OTHER OBSERVERS
 (1.17, 1.19, 1.21) MUST EQUAL 100906.

ERROR127 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE RECORDER
 (1.21) IS 06... THEN WHO MADE THE SIGHTING (1.31)
 SHOULD BE EQUAL TO 11 OR 10 OR 09.

ERROR128 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
 OBSERVER (1.15) IS 04... THEN THE OTHER OBSERVERS
 (1.17, 1.19, 1.21) MUST EQUAL 061011.

ERROR129 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE RECORDER
 (1.21) IS 11... THEN WHO MADE THE SIGHTING (1.31)
 SHOULD BE EQUAL TO 04 OR 06 OR 10.

ERROR130 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE BOW
 OBSERVER (1.15) IS 09... THEN THE OTHER OBSERVERS
 (1.17, 1.19, 1.21) MUST EQUAL 110604.

ERROR131 IF THE FLIGHT # (1.04) IS 18 THRU 20 AND THE RECORDER
 (1.21) IS 04... THEN WHO MADE THE SIGHTING (1.31)
 SHOULD BE EQUAL TO 09 OR 11 OR 06.

ERROR132 THE SIGHTING SHOULD NOT HAVE BEEN MADE BY THE RECORDER
 THEREFORE (1.31) MUST NOT EQUAL (1.21).

ERROR133 IF E1 OBS CODE (1.48) IS >0...THEN E1 BEST EST (1.50)
 OR E1 HIGHEST EST (1.54) OR E1 LOWEST EST (1.58) MUST
 BE GREATER THAN ZERO.

ERROR134 IF E2 OBS CODE (2.05) IS >0...THEN E2 BEST EST (2.07)
 OR E2 HIGHEST EST (2.11) OR E2 LOWEST EST (2.15) MUST
 BE GREATER THAN ZERO.

ERROR135 IF E3 OBS CODE (2.24) IS >0...THEN E3 BEST EST (2.30)
 OR E3 HIGHEST EST (2.26) OR E3 LOWEST EST (2.34) MUST
 BE GREATER THAN ZERO.

ERROR136 IF E4 OBS CODE (2.43) IS >0...THEN E4 BEST EST (2.49)
 OR E4 HIGHEST EST (2.45) OR E4 LOWEST EST (2.53) MUST
 BE GREATER THAN ZERO.

ERROR137 IF E5 OBS CODE (2.62) IS >0...THEN E5 BEST EST (2.68)
 OR E5 HIGHEST EST (2.64) OR E5 LOWEST EST (2.72) MUST

BE GREATER THAN ZERO.

ERROR138 IF E6 OBS CODE (3.05) IS >0...THEN E6 BEST EST (3.11) OR E6 HIGHEST EST (3.07) OR E6 LOWEST EST (3.15) MUST BE GREATER THAN ZERO.

ERROR139 IF E1 BEST EST (1.50) OR E1 HIGHEST EST (1.54) OR E1 LOWEST EST (1.58) IS >0... THEN E1 OBS CODE (1.48) MUST BE GREATER THAN ZERO.

ERROR140 IF E2 BEST EST (2.07) OR E2 HIGHEST EST (2.11) OR E2 LOWEST EST (2.15) IS >0... THEN E2 OBS CODE (2.05) MUST BE GREATER THAN ZERO.

ERROR141 IF E3 BEST EST (2.30) OR E3 HIGHEST EST (2.26) OR E3 LOWEST EST (2.34) IS >0... THEN E3 OBS CODE (2.24) MUST BE GREATER THAN ZERO.

ERROR142 IF E4 BEST EST (2.49) OR E4 HIGHEST EST (2.45) OR E4 LOWEST EST (2.53) IS >0... THEN E4 OBS CODE (2.43) MUST BE GREATER THAN ZERO.

ERROR143 IF E5 BEST EST (2.68) OR E5 HIGHEST EST (2.64) OR E5 LOWEST EST (2.72) IS >0... THEN E5 OBS CODE (2.62) MUST BE GREATER THAN ZERO.

ERROR144 IF E6 BEST EST (3.11) OR E6 HIGHEST EST (3.07) OR E6 LOWEST EST (3.15) IS >0... THEN E6 OBS CODE (3.05) MUST BE GREATER THAN ZERO.

ERROR145 IF E1 BEST EST AND E1 HIGHEST EST ARE NON-BLANK...THEN E1 BEST EST (1.50) MUST BE <= E1 HIGHEST EST (1.54)

ERROR146 IF E1 BEST EST AND E1 LOWEST EST ARE NON-BLANK ...THEN E1 BEST EST (1.50) MUST BE => E1 LOWEST EST (1.58).

ERROR147 IF E1 LOWEST EST AND E1 HIGHEST EST ARE NON-BLANK ... THEN E1 LOWEST EST (1.58) MUST BE <= E1 HIGHEST EST (1.54).

ERROR148 IF E2 BEST EST AND E2 HIGHEST EST ARE NON-BLANK...THEN E2 BEST EST (2.0) MUST BE <= E2 HIGHEST ESO (2311

ERROR149 IF E2 BEST EST AND E2 LOWEST EST ARE NON-BLANK ...THEN E2 BEST EST (2.07) MUST BE => E2 LOWEST EST (2.15).

ERROR150 IF E2 LOWEST EST AND E2 HIGHEST EST ARE NON-BLANK 8HH THEN E2 LOWEST EST (2.15) MUST BE <= E2 HIGHEST EST (2.11).

ERROR151 IF E3 BEST EST AND E3 HIGHEST EST ARE NON-BLANK...THEN E3 BEST EST (2.26) MUST BE <= E3 HIGHEST EST (2.30)

ERROR152 IF E3 BEST EST AND E3 LOWEST EST ARE NON-BLANK ...THEN E3 BEST EST (2.26) MUST BE => E3 LOWEST EST (2.34).

ERROR153 IF E3 LOWEST EST AND E3 HIGHEST EST ARE NON-BLANK ... THEN E3 LOWEST EST (2.34) MUST BE <= E3 HIGHEST EST (2.30).

ERROR154 IF E4 BEST EST AND E4 HIGHEST EST ARE NON-BLANK...THEN E4 BEST EST (2.45) MUST BE <= E4 HIGHEST EST (2.49)

ERROR155 IF E4 BEST EST AND E4 LOWEST EST ARE NON-BLANK ...THEN E4 BEST EST (2.45) MUST BE => E4 LOWEST EST (2.53).

ERROR156 IF E4 LOWEST EST AND E4 HIGHEST EST ARE NON-BLANK ... THEN E4 LOWEST EST (2.53) MUST BE <= E4 HIGHEST EST (2.49).

ERROR157 IF E5 BEST EST AND E5 HIGHEST EST ARE NON-BLANK...THEN E5 BEST EST (2.64) MUST BE <= E5 HIGHEST EST (2.68)

ERROR158 IF E5 BEST EST AND E5 LOWEST EST ARE NON-BLANK ...THEN E5 BEST EST (2.64) MUST BE => E5 LOWEST EST (2.72).

ERROR159 IF E5 LOWEST EST AND E5 HIGHEST EST ARE NON-BLANK ...

THEN E5 LOWEST EST (2.72) MUST BE $\leq$ E5 HIGHEST EST (2.68).

ERROR160 IF E6 BEST EST AND E6 HIGHEST EST ARE NON-BLANK...THEN
E6 BEST EST (3.07) MUST BE $\leq$ E6 HIGHEST EST (3.11)

ERROR161 IF E6 BEST EST AND E6 LOWEST EST ARE NON-BLANK ...THEN
E6 BEST EST (3.07) MUST BE $\Rightarrow$ E6 LOWEST EST (3.15).

ERROR162 IF E6 LOWEST EST AND E6 HIGHEST EST ARE NON-BLANK ...
THEN E6 LOWEST EST (3.15) MUST BE $\leq$ E6 HIGHEST EST (3.11).

ERROR163 IF % SPECIES 1 (1.62) >0 , THEN SPECIES CODE 1 (1.65)
MUST BE >0 .

ERROR164 IF % SPECIES 2 (2.19) >0 , THEN SPECIES CODE 2 (2.22)
MUST BE >0 .

ERROR165 IF % SPECIES 3 (2.38) >0 , THEN SPECIES CODE 3 (2.41)
MUST BE >0 .

ERROR166 IF % SPECIES 4 (2.57) >0 , THEN SPECIES CODE 4 (2.60)
MUST BE >0 .

ERROR167 IF % SPECIES 5 (2.76) >0 , THEN SPECIES CODE 5 (2.79)
MUST BE >0 .

ERROR168 IF SPECIES CODE 1 (1.65) >0 , THEN % SPECIES 1 (1.62)
MUST BE >0 .

ERROR169 IF SPECIES CODE 2 (2.22) >0 , THEN % SPECIES 2 (2.19)
MUST BE >0 .

ERROR170 IF SPECIES CODE 3 (2.41) >0 , THEN % SPECIES 3 (2.38)
MUST BE >0 .

ERROR171 IF SPECIES CODE 4 (2.60) >0 , THEN % SPECIES 4 (2.57)
MUST BE >0 .

ERROR172 IF SPECIES CODE 5 (2.79) >0 , THEN % SPECIES 5 (2.76)
MUST BE >0 .

ERROR173 IF ANY OF THE FOLLOWING ARE NON-BLANK ... THEN THE
SUM OF ALL OF THEM MUST BE EQUAL TO 100.
 % SPECIES 1 (1.62)
 % SPECIES 2 (2.19)
 % SPECIES 3 (2.38)
 % SPECIES 4 (2.57)
 % SPECIES 5 (3.76)

ERROR174 AT LEAST ONE OF THE FOLLOWING MUST BE >0
 % SPECIES 1 (1.62)
 % SPECIES 2 (2.19)
 % SPECIES 3 (2.38)
 % SPECIES 4 (2.57)
 % SPECIES 5 (3.76)

1979-1980 Captain's Bridge Log Data.

SET	DATE AND TIME	POSITION	READ FORT	SHELL (FL)	MARINE MAMMALS	STOCK NAME	CHASED	CAUGHT	MORTALITIES	SERIOUS INJURY	TUNA	TONS	BKDH.	MARINE MAMMAL RELEASE PROCEDURES USED & REMARKS
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	
	DATE TIME	LAT. LONG.			SPOTTERS SPINNERS OTHER						YELLOWFIN SKIPJACK OTHER		YES NO	

NOTE: The vessel shall retain one copy of this log for reference.

PRINT NAME OF VESSEL

I THE UNDERSIGNED HEREBY DECLARE
UNDER PENALTY OF PERJURY THAT THE
INFORMATION SUPPLIED IN THIS LOG IS
TRUE AND CORRECT.NATIONAL MARINE FISHERIES SERVICE
181 STREET PIER, ROOM 7
1140 N. HARBOR DRIVE
SAN DIEGO, CALIFORNIA 92101
Tel: (714) 293.Submit the original and one
copy within 28 hours after
arrival in port to:

TRIP DATES

CERTIFICATE NUMBER

FSW

SIGNATURE OF VESSEL OWNER

1979-1980 Captain's Bridge Log Data: BLANK, RANGE, and LOGICAL
error criteria

Data Verification Specifications for the 1977-1982 BRIDGE LOG RECORD

1977-1982 Bridge Log Record Form Data Element Blankness and Range Editing Specifications

Record 1 of 2

Data Element	Columns	Character type	Blankness OK?	Range Lower	Range Upper
Trip Number	1-3	N	No	1	325
Set Number	4-6	N	No	0	120
Record Number	7	N	No	1	1
Vessel Code	8-11	N	No	67	472
Vessel Class	12	N	No	2	3
Certificate Number	13-15	N	No	500	700
Year	16-17	N	No	77*	82*
Month	18-19	N	No	1	12
Day	20-21	N	No	1	31
Time SetStart	22-25	N	Yes	530	1859
Position:					
Latitude degrees	26-27	N	No	0	23
Latitude minutes	28-29	N	Yes	0	59
N or S Hemisphere	30	N	No	1	2
Longitude degrees	31-33	N	No	80	140
Longitude minutes	34-35	N	Yes	0	59
E or W Hemisphere	36	N	No	2	2
Beaufort Number	37	N	Yes	0	8
Swell Height	38-39	N	Yes	0	10
Species Composition of School	40-41	N	No	1	9
Spotted Porpoise Chased	42-46	N	No	0	5000
Spinner Porpoise Chased	47-51	N	No	0	5000
Other Porpoise Chased	52-56	N	No	0	5000
Spotted Porpoise Caught	57-61	N	No	0	5000
Spinner Porpoise Caught	62-66	N	No	0	5000
Other Porpoise Caught	67-71	N	No	0	5000
Spotted Porpoise Killed	72-74	N	No	0	100
Spinner Porpoise Killed	75-77	N	No	0	50
Others Porpoise Killed	78-80	N	No	0	50

*Each year's data were edited for that year.

A = Alpha

B = Blank

N = Numeric

Data Verification Specifications for the 1977-1982 BRIDGE LOG RECORD
(continued).

1977-1982 Bridge Log Record Form
Data Element Blankness and Range Editing Specifications

Record 2 of 2

Data Element	Columns	Character type	Blankness OK?	Range	
				Lower	Upper
Trip Number	1-3	N	No	1	325
Set Number	4-6	N	No	0	120
Record Number	7	N	No	2	2
Spotted Porpoise Injured	8-9	N	Yes	0	10
Spinner Porpoise Injured	10-11	N	Yes	0	10
Other Porpoise Injured	12-13	N	Yes	0	10
Tons Yellowfin	14-16	N	No	0	100
Tons Skipjack	17-19	N	No	0	20
Tons Other	20-22	N	No	0	20
Other Fish Code	23	N	Yes	1	8
Backdown ? Y/N	24	N	No	1	3
Speedboats ? Y/N	25	N	No	1	3
Raft Rescue ? Y/N	26	N	No	1	3
Hand Rescue ? Y/N	27	N	No	1	3
Total Porpoise Chased	28-32	N	Yes	50	5000
Total Porpoise Caught	33-37	N	Yes	1	5000
Total Porpoise Killed	38-40	N	Yes	1	100
Total Porpoise Injured	41-42	N	Yes	1	10
NMFS Cruise Number	43-45	N	Yes	na	na

A = Alpha

B = Blank

N = Numeric

ERROR001 IF PRESENT TRIP(1.01) IS EQUAL TO PREVIOUS TRIP THEN
PRESENT SET(1.04) SHOULD BE GREATER THAN PREVIOUS SET

ERROR002 IF SET(1.04) EQUALS 0 THEN MONTH(1.18),LATITUDE(1.26),
LONGITUDE(1.31),SPECIES COMP(1.40),
SPOT CAPTURED(1.57), SPIN CAPTURED(1.62),
OTHER CAPTURED(1.67),YF CAUGHT(2.14),SK CAUGHT(2.17)
AND OTHER CAUGHT(2.20) SHOULD BE BLANK

ERROR003 IF PRESENT TRIP(1.01) IS EQUAL TO PREVIOUS TRIP THEN
PRESENT VESSEL CODE(1.08) SHOULD BE EQUAL TO PREVIOUS
VESSEL CODE

ERROR004 IF PRESENT TRIP(1.01) IS EQUAL TO PREVIOUS TRIP THEN
PRESENT VESSEL CLASS(1.12) SHOULD BE EQUAL TO PREVIOUS
VESSEL CLASS

ERROR005 IF PRESENT TRIP(1.01) IS EQUAL TO PREVIOUS TRIP THEN
PRESENT CERT 3DIGITS(1.13) SHOULD BE EQUAL TO PREVIOUS
CERT 3DIGITS

ERROR006 IF PRESENT TRIP(1.01) IS EQUAL TO PREVIOUS TRIP THEN
PRESENT MONTH(1.18) SHOULD BE EQUAL TO OR GREATER THAN
PREVIOUS MONTH

ERROR007 IF PRESENT TRIP(1.01) IS EQUAL TO PREVIOUS TRIP AND IF
PRESENT MONTH(1.18) IS EQUAL TO PREVIOUS MONTH THEN
PRESENT DAY(1.20) SHOULD BE EQUAL TO OR GREATER THAN
PREVIOUS DAY

ERROR008 IF PRESENT TRIP(1.01) IS EQUAL TO PREVIOUS TRIP AND IF
PRESENT DAY(1.20) IS EQUAL TO PREVIOUS DAY AND
IF PRESENT TIME SET START IS NON-BLANK THEN
PRESENT TIME SET START(1.22) SHOULD BE GREATER THAN
PREVIOUS TIME SET START

ERROR009 IF SPECIES COMP1(1.40) EQUALS 1 THEN SPOT SCHOOL(1.42)
SHOULD BE GREATER THAN 0, SPIN SCHOOL(1.47) SHOULD BE
NON-BLANK AND EQUAL TO 0 AND OTHER SCHOOL(1.52) SHOULD
BE NON-BLANK AND EQUAL TO 0

ERROR010 IF SPECIES COMP1(1.40) EQUALS 2 THEN SPOT SCHOOL(1.42)
SHOULD BE NON-BLANK AND EQUAL TO 0, SPIN SCHOOL(1.47)
SHOULD BE GREATER THAN 0 AND OTHER SCHOOL(1.52) SHOULD
BE NON-BLANK AND EQUAL TO 0

ERROR011 IF SPECIES COMP1(1.40) EQUALS 3 THEN SPOT SCHOOL(1.42)
SHOULD BE GREATER THAN 0, SPIN SCHOOL(1.47) SHOULD BE
GREATER THAN 0 AND OTHER SCHOOL(1.52) SHOULD BE
NON-BLANK AND EQUAL TO 0

ERROR012 IF SPECIES COMP1(1.40) EQUALS 4,5,6 OR 8 THEN SPOT
SCHOOL(1.42) SHOULD BE NON-BLANK AND EQUAL TO 0, SPIN
SCHOOL(1.47) SHOULD BE NON-BLANK AND EQUAL TO 0 AND
OTHER SCHOOL(1.52) SHOULD BE GREATER THAN 0
SCHOOL(1.52) SHOULD BE GREATER THAN 0

ERROR014 IF SPECIES COMP1(1.40) EQUALS 9 THEN TOTAL IN SCHOOL
(2.28) SHOULD BE GREATER THAN 0

ERROR016 IF SPOT SCHOOL(1.42) IS NON-BLANK AND EQUAL TO 0 THEN
SPECIES COMP1(1.40) SHOULD EQUAL 2,4,5,6,7 OR 8

ERROR017 IF SPOT SCHOOL(1.42) IS NON-BLANK AND EQUAL TO 0 THEN
SPOT CAPTURED(1.57) SHOULD BE NON-BLANK AND EQUAL
SPOT KILLED(1.72) SHOULD BE NON-BLANK AND EQUAL
AND SPOT INJURED(2.08) SHOULD BE NON-BLANK AND

EQUAL TO 0.

ERROR018 IF SPOT SCHOOL(1.42) IS GREATER THAN 0 THEN SPECIES
COMP1(1.40) SHOULD EQUAL 1,3 OR 7

ERROR020 IF SPIN SCHOOL(1.47) IS NON-BLANK AND EQUAL TO 0 THEN
SPECIES COMP1(1.40) SHOULD EQUAL 1,4,5,6,7 OR 8

ERROR021 IF SPIN SCHOOL(1.47) IS NON-BLANK AND EQL TO 0, THEN
SPIN CAPTURED(2.62) SHOULD BE NON-BLANK AND EQUAL
TO 0, SPIN KILLED(1.75) SHOULD BE NON-BLANK AND EQUAL
TO 0, AND SPIN INJURED(2.10) SHOULD BE NON-BLANK AND
EQUAL TO 0.

ERROR022 IF SPIN SCHOOL(1.47) IS GREATER THAN 0 THEN SPECIES
COMP1(1.40) SHOULD EQUAL 2,3 OR 7

ERROR024 IF OTHER SCHOOL(1.52) IS NON-BLANK AND EQUAL TO 0 THEN
SPECIES COMP1(1.40) SHOULD EQUAL 1,2 OR 3

ERROR025 IF OTHER SCHOOL(1.52) IS NON-BLANK AND EQUAL TO 0 THEN
OTHER CAPTURED(1.67) SHOULD BE NON-BLANK AND EQL TO 0,
OTHER KILLED(1.78) SHOULD BE NON-BLANK AND EQUAL TO 0
AND OTHER INJURED CAPTURED(2.12) SHOULD BE NON-BL
TO 0

ERROR026 IF OTHER SCHOOL(1.52) IS GREATER THAN 0 THEN SPECIES
COMP1(1.40) SHOULD EQUAL 4,5,6,7 OR 8

ERROR029 IF SPOT CAPTURED(1.57) IS NON-BLANK AND EQUAL TO 0,
THEN SPOT KILLED(1.72) SHOULD BE NON-BLANK AND EQUAL
TO 0, AND SPOT INJURED(2.08) SHOULD BE NON-BLANK AND
EQUAL TO 0.

ERROR030 IF SPOT CAPTURED(1.57) IS GREATER THAN 0 THEN SPECIES
COMP1(1.40) SHOULD EQUAL 1,3 OR 7 AND SPOT
SCHOOL(1.42) SHOULD BE GREATER THAN 0.

ERROR032 IF SPIN CAPTURED(1.62) IS NON-BLANK AND EQL TO 0 THEN
SPIN KILLED(1.75) SHOULD BE NON-BLANK AND EQL TO 0 AND
SPIN INJURED(2.10) SHOULD BE NON-BLANK AND EQUAL TO 0

ERROR033 IF SPIN CAPTURED(1.62) IS GREATER THAN 0 THEN SPECIES
COMP1(1.40) SHOULD EQUAL 2,3 OR 7 AND SPIN
SHCOOL(1.57) SHOULD BE GREATER THAN 0.

ERROR035 IF OTHER CAPTURED(1.67) IS NON-BLANK AND EQUAL TO 0,
OTHER KILLED(1.78) SHOULD BE NON-BLANK AND EQUAL
TO 0, AND OTHER INJURED(2.12) SHOULD BE NON-BLANK AND
EQUAL TO 0.

ERROR036 IF OTHER CAPTURED(1.67) IS GREATER THAN 0 THEN SPECIES
COMP1(1.40) SHOULD EQUAL 4,5,6,7 OR 8 AND OTHER SCHOOL
(1.52) SHOULD BE GREATER THAN 0

ERROR037 IF SPOT SCHOOL(1.42) IS NON-BLANK AND EQUAL TO 0 AND
SPIN SCHOOL(1.47) IS NON-BLANK AND EQUAL TO 0 THEN
OTHER SCHOOL(1.52) SHOULD BE GREATER THAN 0

ERROR039 IF SPOT CAPTURED(1.57) IS NON-BLANK AND EQUAL TO 0 AND
SPIN CAPTURED(1.62) IS NON-BLANK AND EQUAL TO 0 AND
OTHER CAPTURED(1.67) IS NON-BLANK AND EQUAL TO 0 THEN
YF CAUGHT(2.14) SHOULD EQUAL 0, SK CAUGHT(2.17) SHOULD
EQUAL 0 AND OTHER CAUGHT(2.20) SHOULD EQUAL 0

ERROR041 IF SPOT KILLED(1.72) IS GREATER THAN 0 THEN SPECIES
COMP1(1.40) SHOULD EQUAL 1,3 OR 7, SPOT CAPTURED(1.57)
SHOULD BE GREATER THAN 0 AND SPOT SCHOOL(1.42) SHOULD
BE GREATER THAN 0

ERROR042 IF SPIN KILLED(1.75) IS GREATER THAN 0 THEN SPECIES
COMP1(1.40) SHOULD EQUAL 2,3 OR 7, SPIN CAPTURED(1.62)

SHOULD BE GREATER THAN 0 AND SPIN SCHOOL(1.47) SHOULD BE GREATER THAN 0

ERROR043 IF OTHER KILLED(1.78) IS GREATER THAN 0 THEN SPECIES. COMPl(1.40) SHOULD EQUAL 4,5,6,7 OR 8, OTHER CAPTURED (1.67) SHOULD BE GREATER THAN 0 AND OTHER SCHOOL(1.52) SHOULD BE GREATER THAN 0

ERROR044 IF SPOT INJURED(2.08) IS GREATER THAN 0 THEN SPECIES COMPl(1.40) SHOULD EQUAL 1,3 OR 7, SPOT CAPTURED(1.57) SHOULD BE GREATER THAN 0 AND SPOT SCHOOL(1.42) SHOULD BE GREATER THAN 0

ERROR045 IF SPIN INJURED(2.10) IS GREATER THAN 0 THEN SPECIES COMPl(1.40) SHOULD EQUAL 2,3 OR 7, SPIN CAPTURED(1.62) SHOULD BE GREATER THAN 0 AND SPIN SCHOOL(1.47) SHOULD BE GREATER THAN 0

ERROR046 IF OTHER INJURED(2.12) IS GREATER THAN 0 THEN SPECIES COMPl(1.40) SHOULD EQUAL 4,5,6,7 OR 8, OTHER CAPTURED (1.67) SHOULD BE GREATER THAN 0 AND OTHER SCHOOL(1.52) SHOULD BE GREATER THAN 0

ERROR048 IF SPOT KILLED(1.72) IS GREATER THAN 0 AND SPIN KILLED (1.75) IS GREATER THAN 0 THEN OTHER KILLED(1.78) SHOULD EQUAL 0.

ERROR050 IF YF CAUGHT(2.14) IS GREATER THAN 0 THEN SPOT CAPTURED(1.57) SHOULD BE GREATER THAN 0, OR SPIN CAPTURED(1.62) SHOULD BE GREATER THAN 0, OR OTHER CAPTURED(1.67) SHOULD BE GREATER THAN 0, OR TOTAL CAPTURED(2.33) SHOULD BE GREATER THAN 0.

ERROR051 IF SK CAUGHT(2.17) IS GREATER THAN 0 THEN SPOT CAPTURED(1.57) SHOULD BE GREATER THAN 0, OR SPIN CAPTURED(1.62) SHOULD BE GREATER THAN 0, OR OTHER CAPTURED(1.67) SHOULD BE GREATER THAN 0, OR TOTAL CAPTURED(2.33) SHOULD BE GREATER THAN 0.

ERROR052 IF OTHER CAUGHT(2.20) IS GREATER THAN 0 THEN SPOT CAPTURED(1.57) SHOULD BE GREATER THAN 0, OR SPIN CAPTURED(1.62) SHOULD BE GREATER THAN 0, OR OTHER CAPTURED(1.67) SHOULD BE GREATER THAN 0, OR TOTAL CAPTURED(2.33) SHOULD BE GREATER THAN 0

ERROR053 IF OTHER CAUGHT(2.20) IS GREATER THAN 0 THEN OTHER FISH CODE(2.23) SHOULD BE GREATER THAN 0

ERROR054 IF OTHER CAUGHT(2.20) IS NON-BLANK AND EQUAL TO 0 THEN OTHER FISH CODE(2.23) SHOULD BE BLANK

ERROR055 IF OTHER FISH CODE(2.23) IS BLANK THEN OTHER CAUGHT (2.20) SHOULD EQUAL 0

ERROR056 IF OTHER FISH CODE(2.23) IS GREATER THAN 0 THEN OTHER CAUGHT(2.20) SHOULD BE GREATER THAN 0

ERROR063 IF TOTAL IN SCHOOL(2.28) IS GREATER THAN 0 THEN SPOT SCHOOL(1.42), SPIN SCHOOL(1.47) AND OTHER SCHOOL(1.52) SHOULD BE BLANK AND SPECIES COMPl(1.40) SHOULD EQUAL 9

ERROR065 IF TOTAL CAPTURED(2.33) IS GREATER THAN 0 THEN SPOT CAPTURED(1.57), SPIN CAPTURED(1.62) AND OTHER CAPTURED (1.67) SHOULD BE BLANK

ERROR067 IF TOTAL KILLED(2.38) IS GREATER THAN 0 THEN SPOT KILLED(1.72), SPIN KILLED(1.75) AND OTHER KILLED(1.78) SHOULD BE BLANK

ERROR069 IF TOTAL INJURED(2.41) IS GREATER THAN 0 THEN SPOT INJURED(2.08), SPIN INJURED(2.10) AND OTHER INJURED

(2.12) SHOULD BE BLANK

1979-1980 Cruise Specification Data.

1979 CRUISE SPECIFICATIONS RECORD

CRUISE #	CARD #	VESSEL CODE	YEAR BOAT BUILT	FISH CAPACITY (SHORT TONS)	VESSEL CLASS	DATE SAILED YR.	DATE SAILED MO.	DATE SAILED DAY	DATE RETURNED YR.	DATE RETURNED MO.	DATE RETURNED DAY	COMPLETED TRIP? Y/N
	01											
1	4	6	10	12	16	17	19	21	23	25	27	29

RETURNED TO: _____

OBSERVER DATA				TYPE CRUISE	TYPE GEAR	#SPDBTS ABOARD	HELICOPTER? Y/N	BOWTHRUSTER? Y/N	ANTI-TORQUE CABLE? Y/N
OBS. TYPE	# TRIPS	# M.M. SETS SEEN	SEQ. #						
33	35	37	40	41	43	45	45	47	48

NET	NET LENGTH (FM)	NET DEPTH (FM)	NET DEPTH (Strops)	MESH SIZE (In. & 100ths)
51	54	57	59	

SAFETY PANEL Y/N	YEAR INSTALLED	PANEL LENGTH (FM)	PANEL DEPTH (FM)	PANEL DEPTH (Strops)	MESH SIZE (In. & 100ths)
62	63	65	68	70	72

CARD #	VESSEL NAME
02	
4	31

OPERATOR CERTIFICATE HOLDER

CERTIFICATE NUMBER

61

69

VESSEL CERTIFICATE HOLDER

CERTIFICATE NUMBER

35

43

1979-1980 Cruise Specifications Data (1979 format): BLANK, RANGE,
and LOGICAL error criteria

1979-1980 Cruise Specifications Record Form
Data Element Blankness and Range Editing Specifications

Record 1 of 3

Data Element	Columns	Character type	Blankness	Range	
			OK?	Lower	Upper
Cruise Number (1979)	1-3	N	No	450	590
(1980)	1-3	N	No	570	700
Record Number	4-5	N	No	1	1
Vessel Code	6-9	N	No	29	460
Year Boat Built	10-11	N	No	44	79*
Fish Capacity (short tons)	12-15	N	No	401	2000
Vessel Class	16	N	No	1	3
Date Sailed -Yr	17-18	N	No	79*	79*
Date Sailed -Mo	19-20	N	No	1	12
Date Sailed -Day	21-22	N	No	1	31
Date Returned -Yr	23-24	N	No	79*	79*
Date Returned -Mo	25-26	N	No	1	12
Date Returned -Day	27-28	N	No	1	31
Completed Trip ? Y/N	29	N	No	1	2
Observer Number	30-32	N	No	1	340
Observer Type	33-34	N	No	1	3
Number of Trips	35-36	N	No	0	9
Number of marine mammal sets seen	37-39	N	No	0	400
Sequence Number	40	N	No	1	3
Type Cruise	41-42	N	No	1	4
Type Gear	43-44	N	No	1	5
Number of Speedboats	45	N	No	4	6
Helicopter ? Y/N	46	N	No	1	2
Bowthruster ? Y/N	47	N	No	1	2
Anti-torque Cable ? Y/N	48	N	No	1	2
Year Net Built	49-50	N	No	59	79*
Net Length (FM)	51-53	N	No	480	800
Net Depth (FM)	54-56	N	No	48	90
Net Depth (STRIPS)	57-58	N	No	8	15
Mesh Size (In. & 1000ths)	59-61	N	No	375	425
Safety Panel ? Y/N	62	N	No	1	2
Year Panel Installed	63-64	N	No	75	79*
Panel Length (FM)	65-67	N	No	162	200
Panel Depth (FM)	68-69	N	No	6	20
Panel Depth (STRIPS)	70-71	N	No	1	4
Mesh Size (In. & 100ths)	72-74	N	No	113	125

* Each years data were edited for that year

A = Alpha

B = Blank

N = Numeric

1979-1980 Cruise Specifications Record Form
Data Element Blankness and Range Editing Specifications

Record 2 of 3

Data Element	Columns	Character Blankness		Range	
		type	OK?	Lower	Upper
Cruise Number (1979)	1-3	N	No	450	590
(1980)	1-3	N	No	570	700
Record Number	4-5	N	No	2	2
Vessel Name	6-31	A	Yes		
Subpart of name	6-10	A	No		
Operator Certificate Holder	32-60	A	Yes		
Subpart of holder	32-34	A	No		
Certificate Number	61-69	A/N	No		

A = Alpha

B = Blank

N = Numeric

1979-1980 Cruise Specifications Record Form
Data Element Blankness and Range Editing Specifications

Record 3 of 3

Data Element	Columns	Character Blankness		Range	
		type	OK?	Lower	Upper
Cruise Number (1979)	1-3	N	No	450	590
(1980)	1-3	N	No	570	700
Record Number	4-5	N	No	3	3
Vessel Certificate Holder	6-34	A	Yes		
Subpart of holder	6-8	A	No		
Certificate Number	35-43	A/N	No		

A = Alpha

B = Blank

N = Numeric

CSEDIT79 L

- ERROR001 IF THE YEAR BOAT BUILT IS GREATER THAN 1960 , AND THE FISH CAPACITY IS EQUAL TO OR GREATER THAN 0400 TONS .. THE VESSEL CLASS MUST BE EQUAL TO 3.
- ERROR002 IF THE YEAR BOAT BUILT IS LESS THAN 1961, AND THE FISH CAPACITY IS EQUAL TO OR GREATER THAN 0400 TONS ... THE VESSEL CLASS MUST BE EQUAL TO 2.
- ERROR003 IF THE FISH CAPACITY IF LESS THAN 0400 TONS ... THE VESSEL CLASS MUST BE EQUAL TO 1.
- ERROR004 IF THE PRESENT OCCURANCE OF OBSERVER (1.30) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF OBSERVER ... THE PRESENT OCCURANCE OF TOTAL OBSERVERS MUST BE EQUAL TO THE PREVIOUS OCCURANCE OF TOTAL OBSERVERS + 1.
- ERROR005 IF THE PRESENT OCCURANCE OF TOTAL OBSERVERS (1.40) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF TOTAL OBSERVERS ... THE PRESENT OCCURANCE OF OBSERVER (1.30) MUST BE NOT EQUAL TO THE PREVIOUS OCCURANCE OF OBSERVER.
- ERROR006 IF THE NUMBER OF PORPOISE SETS SEEN (1.37) IS GREATER THAN ZERO ... THE NUMBER OF TRIPS (1.35) MUST BE GREATER THAN ZERO.
- ERROR007 IF THE GEAR TYPE IS 03 ... THE PANEL STRIP DEPTH MUST BE EQUAL TO 02.
- ERROR008 IF THE GEAR TYPE IS 03 ... THE PANEL MESH SIZE MUST BE EQUAL TO OR LESS THAN 125 INCHES.
- ERROR009 IF THE GEAR TYPE IS 04 ... THE PANEL DEPTH MUST BE EQUAL TO 20 FATHOMS.
- ERROR010 IF THE GEAR TYPE IS 04 ... THE PANEL STRP DEPTH MUST BE EQUAL TO 04.
- ERROR011 IF THE GEAR TYPE IS 04 ... THE PANEL MESH SIZE MUST BE EQUAL TO OR LESS THAN 125 INCHES.
- ERROR012 IF THE GEAR TYPE IS 05 ... THE PANEL STRIP DEPTH MUST BE EQUAL TO 01.
- ERROR013 IF THE GEAR TYPE IS 05 ... THE PANEL MESH SIZE MUST BE EQUAL TO OR LESS THAN 125 INCHES.
- ERROR014 IF THIS CRUISE SPECIFICATIONS FILE CONTAINS MORE THAN ONE LOGICAL RECORD SET ... TRIP COMPLETED (1.29) FOR ALL BUT THE LAST OF THESE LOGICAL RECORD SETS SHOULD BE EQUAL TO 2.
- ERROR015 WITHIN THIS FILE, THE LAST OCCURANCE OF TRIP COMPLETED (1.29) SHOULD BE EQUAL TO 1 ... IF NOT , THIS MAY CONSTITUTE AN ERROR.
- ERROR016 IF THIS CRUISE SPECIFICATIONS FILE CONTAINS MORE THAN ONE LOGICAL RECORD SET ... THE ELEMENTS : VESSEL CODE (1.06) , YR BOAT BUILT (1.10) , FISH CAPA&IOY (H 2) Y AND VESSEL CLASS (1.16) FOR EACH OF THE LOGICAL RECORD SETS SHOULD BE IDENTICAL.
- ERROR017 THE PRESENT OCCURANCE OF DATE RETURNED(1.23) SHOULD BE GREATER THAN THE PRESENT OCCURANCE OF DATE DEPARTED (1.17) ... IF IT IS NOT , THIS CONSTITUTES AN ERROR.
- ERROR018 THE PRESENT OCCURANCE OF DATE DEPARTED(1.17) SHOULD BE GREATER THAN THE PREVIOUS OCCURANCE OF DATE RETURNED (1.23) ... IF IT IS NOT , THIS CONSTITUTES AN ERROR.
- ERROR019 IF THE INITIAL OCCURANCE OF TOTAL OBSERVERS (1.40) IS NOT EQUAL TO 1 ... THIS CONSTITUTES AN ERROR.

1979-1980 Porpoise Life History Data (1978 format).

1979-1980 Porpoise Life History Data (1978 format): BLANK, RANGE,
and LOGICAL error criteria

Table 5. Data Verification Specifications for the 1959-1982 Porpoise Life History Record (1978 format). This list includes values for both male, female, and unsexed specimens, although the actual edit criteria applied was determined by the coded value of sex for each logical record.

1959-1982 Porpoise Life History Record Form
Data Element Blankness and Range Editing Specifications

Record 1 of 2

Data Element	Columns	Character type	Blank-ness OK?	Range Lower	Range Upper	Logical Error criteria number
Cruise Number	1-4	N	No	1 500	1000 (1959-1981) 1000 (1982)	
Specimen Number						
Initials	5-7	A	No	AAA	ZZZ	14,23
Number	8-11	N	No	1	900	15
Record Number	12	N	No	1	1	
Species/Stock Code	13-14	N	No	2	95	
Sex	15	N	No	1	2	
Salvage Date-Year	16-17	N	No	59 79	78 (1959-1978) 82 (1979-1982)	
Salvage Date-Month	18-19	N	No	1	12	
Salvage Date-Day	20-21	N	No	1	31	
Set Number	22-24	N	No	1	105	
Position:						
Lat. degrees	25-26	N	No	0	30	12,13
Lat. minutes	27-28	N	No	0	59	
Long. degrees	29-31	N	No	82	150	
Long. minutes	32-33	N	No	0	59	
Capture Quadrant	34	N	No	0	1	
Total Length	35-38	N	No	80	250	
Coloration	39	N	Yes	1	6	
Lactating ? Y/N	40	N	Yes	0	1	
Fetus Sex	41	N	Yes	1	2	
Fetus Length	42-45	N	Yes	1	800	11,22
*Teeth taken ? Y/N	46	N	No	1	2	19,20
Testis taken ? Y/N	47	N	Yes	1	2	20
Ovaries and Uterus taken ? Y/N	48	N	Yes	1	2	20
Fetus taken ? Y/N	49	N	Yes	1	2	
*Stomach taken ? Y/N	50	N	No	1	2	20
*Head taken ? Y/N	51	N	No	1	2	20
*Carcass taken ? Y/N	52	N	No	1	2	
Photos ? Y/N	53	N	Yes	1	2	
Specimen Weight	54-60	N	Yes	22700	1300000	3
Left Gonad Weight	61-67	N	Yes	1	14000	3

Table 5. Data Verification Specifications for the 1959-1982 Porpoise Life History Record (continued).

1959-1982 Porpoise Life History Record Form
Data Element Blankness and Range Editing Specifications

Record 1 of 2

Data Element	Columns	Character type	Blank-	Range		Logical Error criteria number
			ness OK?	Lower	Upper	
Right Gonad Weight	68-74	N	Yes	1	14000	1,17
Right Testis						
Length	75-77	N	Yes	30	300	2
S. G.	78	N	Yes	0	1	
Epi	79	N	Yes	0	2	

*These elements were not coded prior to 1978 and can be blank.

A = Alpha

B = Blank

N = Numeric

Table 5. Data Verification Specifications for the 1959-1982 Porpoise Life History Record (continued).

1959-1982 Porpoise Life History Record Form Data Element Blankness and Range Editing Specifications						
Record 2 of 2						
Data Element	Columns	Character type	Blankness OK?	Range Lower	Range Upper	Logical Error criteria number
Cruise Number	1-4	N	No	1 500	1000 1000	(1959-1978) (1979-1982)
Specimen Number						
Initials	5-7	A	No	AAA	ZZZ	14,23
Number	8-11	N	No	1	900	
Record Number	12	N	No	2	2	
Number of Layers	13-15	N	Yes	0	220	
Luteum Location	16	N	Yes	0	5	
Luteum Diameters						
First	17-18	N	Yes	10	35	
Second	19-20	N	Yes	9	26	
Third	21-22	N	Yes	8	23	
Number of Corpora						
Left Ovary	23-24	N	Yes	0	25	4,6,9
Right Ovary	25-26	N	Yes	0	20	5,7,9
Follicle Diameter	27-29	N	Yes	1	150	10
Number of Corpora on left ovary at stage:						
One	30-31	N	Yes			6
Two	32-33	N	Yes			6
Three	34-35	N	Yes			6
Four	36-37	N	Yes			6
Five	38-39	N	Yes			6
Six	40-41	N	Yes			6
Number of Corpora on right ovary at stage:						
One	42-43	N	Yes			7
Two	44-45	N	Yes			7
Three	46-47	N	Yes			7
Four	48-49	N	Yes			7
Five	50-51	N	Yes			7
Six	52-53	N	Yes			7
Total Number of Corpora on both left and right	54-55	N	Yes	0	27	4,5,9,18
Tubule Diameter	56-58	N				
Fetus weight	59-65	N				
Reading Status	66-67	N				
Reader Code	68-69	N				

A = Alpha

B = Blank

N = Numeric

FOR LHEDIT79 L

ERROR001 IF 'TESTIS COLL' (1.47) IS 1, THEN 'R TESTIS WEIGHT' (1.68) MUST NOT BE BLANK.

ERROR002 IF 'TESTIS COLL' (1.47) IS 1, THEN 'R TESTIS LENGTH' (1.75) MUST NOT BE BLANK.

ERROR003 IF 'OVAR UTER COLL' (1.48) IS 1, THEN 'L OVARY WT' (1.61) OR 'R OVARY WT' (1.68) MUST NOT BE BLANK.

ERROR004 IF 'L OVARY WT' (1.61) IS NOT BLANK, THEN 'NUM CORPORA L' (2.23) AND 'TOTAL CORPORA' (2.54) MUST NOT BE BLANK.

ERROR005 IF SEX (1.15) IS EQUAL TO 2(FEMALE) AND IF 'R OVARY WT' (1.68) IS NOT BLANK, THEN 'NUM CORPORA R' (2.25) AND 'TOTAL CORPORA' (2.54) MUST NOT BE BLANK.

ERROR006 IF 'NUM CORPORA L' (2.23) IS NOT BLANK, THEN 'NUM CORPORA L' MUST EQUAL \$('CORPORA1 L' + 'CORPORA2 L' + 'CORPORA3 L' + 'CORPORA4 L' + 'CORPORA5 L' + 'CORPORA6 L') (2.30)).

ERROR007 IF 'NUM CORPORA R' (2.25) IS NOT BLANK, THEN 'NUM CORPORA R' MUST EQUAL \$('CORPORA1 R' + 'CORPORA2 R' + 'CORPORA3 R' + 'CORPORA4 R' + 'CORPORA5 R' + 'CORPORA6 R') (2.42)).

ERROR008 IF 'LUTEUM LOC' (2.16) IS BLANK, THEN 'TOTAL CORPORA' (2.54) MUST EQUAL \$'NUM CORPORA L' (2.23) + 'NUM CORPORA R' (2.25)).

ERROR009 IF 'LUTEUM LOC' (2.16) IS NOT BLANK, THEN 'TOTAL CORPORA' (2.54) MUST EQUAL \$'NUM CORPORA L' (2.23) + 'NUM CORPORA R' (2.25) + 1).

ERROR010 IF 'OVAR UTER COLL' (1.48) IS 1, THEN 'FOLLICLE MAX DIA' (2.27) MUST NOT BE BLANK.

ERROR011 IF 'FETUS COLL' (1.49) IS 1, THEN 'FETUS LENGTH' (1.42) MUST NOT BE BLANK.

ERROR012 IF 'SPECIES STOCK' (1.13) IS 02,03,10,11 OR 88 THEN 'POSITION' (1.25) MUST BE WITHIN THE PRE-DEFINED BOUNDARIES.

ERROR013 IF 'SPECIES STOCK' (1.13) IS 06, THEN 'POSITION' (1.25) MUST BE WITHIN THE PRE-DEFINED BOUNDARIES.

ERROR014 IF THE OBSERVERS 'INITIALS' ON THE FIRST CARD (1.05) DOES NOT MATCH THE OBSERVERS 'INITIALS' ON THE SECOND CARD (2.05) OR THE OBSERVERS 'INITIALS' ON THE PREVIOUS CARD, THEN THERE IS AN ERROR.

ERROR015 IF THE PRESENT 'CNUMBER' (1.08) FOR A PARTICULAR CRUISE IS LESS THAN OR EQUAL TO THE PREVIOUS 'CNUMBER' FOR THE SAME CRUISE, THEN THERE IS AN ERROR.

ERROR017 IF THE MALE 'SPECIMAN LENGTH' (1.35) IS LESS THAN 160 CM, THEN 'R TESTIS WT' (1.68) MUST NOT BE MORE THAN 50.0 GRAMS.

ERROR018 IF THE FEMALE 'SPECIMAN LENGTH' (1.35) IS LESS THAN 165 CM, THEN 'TOTAL CORPORA' (2.54) MUST NOT BE MORE THAN 02.

ERROR019 IF 'HEAD COLL' (1.51) IS 1, THEN 'TEETH COLL' (1.46) MUST BE 1.

ERROR020 IF 'CARCASS COLL' (1.52) IS 1, THEN 'TEETH COLL'

(1.46), GONADS COLLECTED ('OVAR UTER COLL' (1.48)
(FEMALES) OR 'TESTIS COLL' (1.47) (MALES)),
'STOMACH COLL' (1.50) AND 'HEAD COLL' (1.51)
MUST ALL BE 1.

ERROR021 THE 'POSITION' (1.25) WAS FOUND TO BE BEYOND THE
EASTERN BOUNDARY LINE.

Figure 7. Geographical boundaries for stocks of spotted and spinner dolphins during 1978-1982, and referenced by Logical Errors 12, 13, and 21 for the 1978-1982 data editing criteria.

This line added to
edit NOV. '79 by FRED
DICKSON: Based on
coordinates outlined below.
Specimen must be
below & to left of line.

LAT: 29001
LONG: 110002

LAT: 35001
LONG: 090002

LAT: 08001
LONG: 08000

LAT: 10001
LONG: 150002

02
03
10
11
88

LAT: 15001
LONG: 050002

1979-1980 Marine Mammal Effort and Sightings Data.

CRUISE	DATE		
	YEAR	MONTH	DAY
1	4	6	8

[illegible]

NOAA/OPW 10
85W 1170

NO FOG OR RAIN = 1
FOG = 2
RAIN = 3
FOG AND RAIN = 4

NOAA U.S. DEPT. OF COMMERCE

1979-1980

NOAA FORM 60-105
F5W34 11-78

NOAA - U.S. DEPT. OF COM.

PAGE 1

1979 SHIPBOARD MAMMAL WATCH SIGHTING RECORD

CRUISE #	DATE			SIGHT #	SERIES #	LEG #	CARD #
	YEAR	MONTH	DAY				
							01

SIGHTING CUE				ENVIR. COND. AT CUE		POSITION AT TIME OF CUE				SOURCE		TIME M M SIGHTED		SET #	BIRDS Y N	
TIME	WAVE CODE	WIND CODE	BEARING FROM SHIP	DISTANCE nm & 10ths	SEAU	SURF. TEMP °F & 10ths	LATITUDE	N S	LONGITUDE	E W	SOURCE					
18				22	23	24	27		30	31	34		38	39	44	45
													4E		50	53

AVERAGE CREW ESTIMATE OF SCHOOL SIZE		
MEAN	HIGHEST	LOWEST
54	58	62

OBSERVER ESTIMATE OF SCHOOL SIZE			CARD #	SOURCE CODES 1 D R 2 Verbal 3 Sireline 4 Post Cruise
BEST	HIGHEST	LOWEST		
			02	
66	70	74	77	16

%	CODE	NAME
SPECIES (1)		
18	21	
(2)		
28	31	
(3)		
38	41	
(4)		
48	51	

%	CODE	NAME
SPECIES (1)		
23	26	
(2)		
33	36	
(3)		
43	46	
(4)		
53	56	58

TOTAL TIME OF OBSERVATION _____ ENVIR. COND. (RAIN, OVERCAST, FOG, CHOPPY) _____ CLOSEST DISTANCE OF OBSERVATION _____ AMT. OF TIME AT CLOSEST DISTANCE _____

NOTES: DESCRIBE AND ILLUSTRATE EVERYTHING YOU SAW. SEE BACK OF PAGE

1979 SHIPBOARD MAMMAL
WATCH SIGHTING RECORD

SIGHTING SUMMARY

PAGE 2

IDENTIFYING CHARACTERISTICS —

BEHAVIOR — (DESCRIBE AGGREGATION, MOVEMENT, BOW AND STERN RIDING, BLOWS, ETC.)

ASSOCIATED ANIMALS — (INCLUDE NUMBER AND SPECIES OF BIRDS)

PHOTOS: ROLL# _____ FRAME(S):# _____

1979-1980 Marine Mammal Effort Data (1979 format): BLANK and
RANGE criteria and LOGICAL error criteria for both
datafiles dependent upon the EFFORT order.

1979-1980 Shipboard Marine Mammal Watch Effort Form
Data Element Blankness and Range Editing Specifications

Record 1 of 1

Data Element		Columns	Character type	Blankness OK?	Range Lower Upper	
Cruise number	(1979)	1-3	N	No	450	590
	(1980)				570	700
Year		4-5	N	No	79*	80*
Month		6-7	N	No	1	12
Day		8-9	N	No	1	31
Series number		10-11	N	No	1	10
Leg number		12-13	N	No	1	30
Hour-start-leg		14-15	N	No	6	18
Minutes-start-leg		16-17	N	No	0	59
Surf-temp-start		18-20	N	Yes	550	890
Beaufort-start		21	N	Yes	1	6
Fog-or-rain ? Y/N		22	N	Yes	1	4
Helicopter-Up ? Y/N		23	N	Yes	1	2
Hour-end-leg		24-25	N	No	6	18
Minutes-end-leg		26-27	N	No	0	59
Course		28-30	N	No	0	360
Speed		31-33	N	No	0	180
Position for Series:						
Lat. degrees		34-35	N	Yes	0	33
Lat. minutes		36-37	N	Yes	0	59
N-or-S (Hemisphere)		38	N	Yes	1	2
Long. degrees		39-41	N	Yes	80	139
Long. minutes		42-43	N	Yes	0	59
E-or-W (Hemisphere)		44	N	Yes	2	2
Sightings ? Y/N		45	N	No	1	2
Tot-porp-school		46-47	N	Yes	0	5
Tot-other-MMS		48	N	Yes	0	5
Leg-end-code		49	N	No	1	6
Set number		50-52	N	Yes	1	125

*Each years' data were for that year.

A = Alpha

B = Blank

N = Numeric

FOR MMEDIT79EL

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ERROR001 *****
***** COMMENT *****
*****
CERTAIN NAMES (IE. POSITION , DATE , SERIES , LEG ,
ETC.) ARE DUPLICATED IN BOTH THE EFFORT AND SIGHTING
DATA BASES. THIS CAN BE A SOURCE OF CION ,ESPEC-
IALLY WHEN THE "COMMON" NAMES FROM TWO DIFFERENT
FORMAT TYPES ARE USED IN ONE ERROR MESSAGE. THIS
OCCURS MOST OFTEN IN THE EFFORT/SIGHTING CHECKS
SECTION OF THIS LISTING. CONSEQUENTLY, (E) AND (S)
HAVE BEEN USED AFTER CERTAIN DATA BASE ELEMENT NAMES
IN ORDER TO DENOTE FILE TYPE. AN (E) MEANS THE ELEMENT
IS FROM THE EFFORT RECORD FORMAT ; AN (S) MEANS
THE ELEMENT IS FROM THE SIGHTING RECORD FORMAT.
ERROR004 IF THE PRESENT OCCURANCE OF SERIES (1.12) IS NON BLANK
... THE PRESENT OCCURANCE OF LEG (1.14) MUST BE NON
BLANK.
ERROR005 IF THE PRESENT OCCURANCE OF LEG (1.14) IS NON BLANK ..
THE PRESENT OCCURANCE OF SERIES (1.12) MUST BE NON
BLANK.
ERROR011 IF NLATITUDE (1.34) IS NON BLANK ... N OR S (1.38)
SHOULD BE NON BLANK.
ERROR012 IF NLATITUDE (1.34) IS BLANK ... N OR S (1.38) SHOULD
BE BLANK.
ERROR013 IF NLONGITUDE (1.39) IS NON BLANK ... E OR W (1.44)
SHOULD BE NON BLANK.
ERROR014 IF NLONGITUDE (1.39) IS BLANK ... E OR W (1.44) SHOULD
BE BLANK.
ERROR017 IF THE PRESENT OCCURANCE OF SERIES (1.12) IS BLANK ...
THE PRESENT OCCURANCE OF LEG (1.14) SHOULD BE BLANK.
ERROR018 IF THE PRESENT OCCURANCE OF LEG (1.14) IS BLANK ...
THE PRESENT OCCURANCE OF SERIES (1.12) SHOULD BE BLANK
ERROR046 *****
***** EFFORT CHECKS *****
*****
ERROR047 IF THE PRESENT OCCURANCE OF N OR S (E), (1.38) IS NON
BLANK , AND THE PRESENT OCCURANCE OF N OR S (E) IS NOT
IDENTICAL TO THE LAST NON BLANK OCCURANCE OF N OR S(E)
... THIS MAY CONSTITUTE AN ERROR.
ERROR048 IF THE PRESENT OCCURRENCE OF DATE (1.04) IS IDENTICAL
TO THE PREVIOUS OCCURRENCE OF DATE , AND THE PREVIOUS
LEG END CODE (1.49) IS EQUAL TO EITHER "3" OR "4" ...
THE PRESENT OCCURRENCE OF SERIES (1.10) SHOULD BE EQUAL
TO THE PREVIOUS OCCURRENCE OF SERIES +1 , AND THE
PRESENT OCCURRENCE OF LEG (1.12) SHOULD BE EQUAL TO 01.
ERROR049 IF THE PRESENT OCCURRENCE OF DATE (1.04) IS IDENTICAL
TO THE PREVIOUS OCCURRENCE OF DATE , AND THE PREVIOUS
LEG END CODE (1.49) IS EQUAL TO "1" , "2" , "5" , OR "6"
... THE PRESENT OCCURRENCE OF SERIES (1.10) SHOULD BE
EQUAL TO THE PREVIOUS OCCURRENCE OF SERIES , AND THE
PRESENT OCCURRENCE OF LEG (1.12) SHOULD BE EQUAL TO THE
PREVIOUS OCCURRENCE 06-LEG +1.
ERROR050 IF THE PRESENT OCCURRENCE OF DRETE (E), (1.04) IS

```

IDENTICAL TO THE PREVIOUS OCCURRENCE OF DATE (E), AND THE PRESENT OCCURRENCE OF SERIES (E), (1.12) IS IDENTICAL TO THE PREVIOUS OCCURRENCE OF SERIES PRESENT OCCURRENCE OF LEG (E), (1.14) SHOULD TO THE PREVIOUS OCCURRENCE OF LEG + 1.

ERROR051 IF THE PRESENT OCCURRENCE OF LEG END CODE (1.49) IS EQUAL TO "3" ... THE PRESENT OCCURRENCE OF SET (1.50) SHOULD BE NON BLANK.

ERROR052 IF THE PRESENT OCCURANCE OF LEG END CODE (1.49) IS NOT EQUAL TO "3" ... THE PRESENT OCCURRENCE OF SET (1.50) SHOULD BE BLANK.

ERROR053 IF THE PRESENT OCCURANCE OF SET (E) (1.50) IS NON BLANK ... THE PRESENT OCCURANCE OF SET (E) SHOULD BE GREATER THAN THE LAST NON BLANK OCCURRENCE OF SET (E).

ERROR054 IF THE PRESENT OCCURANCE OF DATE (1.04) IS IDENTICAL TO THE PREVIOUS OCCURRENCE OF DATE , AND THE PREVIOUS LEG END CODE (1.49) IS EQUAL TO EITHER "3" OR "4" ... THE PRESENT OCCURRENCE OF TIME START LEG (1.14) SHOULD BE GREATER THAN THE PREVIOUS OCCURRENCE OF TIME END LEG (1.24).

ERROR055 IF THE PRESENT OCCURANCE OF DATE (1.04) IS IDENTICAL TO THE PREVIOUS OCCURRENCE OF DATE , AND THE PREVIOUS LEG END CODE (1.49) IS EQUAL TO "1" , "2" , "5" , OR "6" ... THE PRESENT OCCURRENCE OF TIME START LEG (1.14) SHOULD BE IDENTICAL TO THE PREVIOUS OCCURANCE OF TIME END LEG (1.24).

ERROR056 IF THE PRESENT OCCURRENCES OF DATE (1.04) AND SERIES (1.10) ARE IDENTICAL TO THE PREVIOUS OCCURANCES OF DATE AND SERIES, AND THE PREVIOUS LEG END CODE (1.49) EQUALS "1" ... THE PRESENT OCCURANCE OF COURSE (1.28) SHOULD BE NOT EQUAL TO THE PREVIOUS OCCURRENCE OF COURSE.

ERROR057 IF THE PRESENT OCCURRENCES OF DATE (1.04) AND SERIES (1.10) ARE IDENTICAL TO THE PREVIOUS OCCURANCES OF DATE AND SERIES, AND THE PREVIOUS LEG END CODE (1.49) EQUALS "2" ... THE PRESENT OCCURANCE OF COURSE (1.28) SHOULD BE IDENTICAL TO THE PREVIOUS OCCURANCE OF COURSE, AND THE PRESENT OCCURANCE OF SPEED (1.31) SHOULD BE NOT EQUAL TO THE PREVIOUS OCCURRENCE OF SPEED.

ERROR058 IF THE PRESENT OCCURRENCES OF DATE (1.04) AND SERIES (1.10) ARE IDENTICAL TO THE PREVIOUS OCCURANCES OF DATE AND SERIES, AND THE PREVIOUS LEG END CODE (1.49) EQUALS "5" ... THE PRESENT OCCURRENCES OF COURSE (1.28) AND SPEED (1.31) SHOULD BE IDENTICAL TO THE PREVIOUS OCCURRENCES OF COURSE AND SPEED , AND THE PRESENT OCCURRENCE OF POSITION (1.34) SHOULD BE NON BLANK.

ERROR059 IF THE PRESENT OCCURRENCES OF DATE (1.04) AND SERIES (1.10) ARE IDENTICAL TO THE PREVIOUS OCCURANCES OF DATE AND SERIES, AND THE PREVIOUS END LEG CODE (1.28) EQUALS "6" ... THE PRESENT OCCURRENCE OF HELICOPTER UP (1.23) SHOULD BE NOT EQUAL TO THE PREVIOUS OCCURRENCE OF HELICOPTER UP.

ERROR060 IF THE PRESENT OCCURRENCE OF COURSE (1.28) IS EQUAL TO "360" ... THE PRESENT OCCURANCE OF TIME END LEG (1.24) LESS THE PRESENT OCCURRENCE OF TIME START LEG (1.14) SHOULD NOT BE GREATER THAN "0005".

- ERROR061 IF THE PRESENT OCCURRENCE OF DATE(1.04) IS IDENTICAL TO THE PREVIOUS OCCURRENCE OF DATE , AND THE PRESENT OCCURRENCE OF TIME START LEG (1.14) IS IDENTICAL TO THE PREVIOUS OCCURRENCE OF TIME END LEG (1.24) ... THE PRESENT OCCURRENCE OF SERIES (1.10) SHOULD BE IDENTICAL TO THE PREVIOUS OCCURRENCE OF SERIES , THE PRESENT OCCURRENCE OF LEG(1.12) SHOULD BE EQUAL TO THE PREVIOUS OCCURRENCE OF LEG +1, AND THE PREVIOUS OCCURRENCE OF LEG END CODE (1.49) SHOULD BE "1" , "2" , "5" , OR "6".
- ERROR062 IF THE PRESENT OCCURRENCE OF DATE(1.04) IS IDENTICAL TO THE PREVIOUS OCCURRENCE OF DATE , AND THE PRESENT OCCURRENCE OF TIME START LEG(1.14) IS NOT EQUAL TO THE PREVIOUS OCCURRENCE OF TIME END LEG (1.24) ... THE PRESENT OCCURRENCE OF SERIES (1.10) SHOULD BE EQUAL TO THE PREVIOUS OCCURRENCE OF SERIES +1 , THE PRESENT OCCURRENCE OF LEG (1.12) SHOULD BE EQUAL TO "01" , AND THE PREVIOUS OCCURRENCE OF LEG END CODE(1.49) SHOULD BE "3" OR "4".
- ERROR063 IF THE PRESENT OCCURRENCE OF TIME START LEG (1.14) IS NOT LESS THAN OR EQUAL TO THE PRESENT OCCURRENCE OF TIME END LEG (1.24) ... THIS CONSTITUTES AN ERROR.
- ERROR064 IF THE PRESENT OCCURRENCE OF DATE(1.04) IS NOT EQUAL TO THE PREVIOUS OCCURRENCE OF DATE ... THE PRESENT OCCURRENCES OF BOTH SERIES (1.10) AND LEG (1.12) SHOULD BE EQUAL TO "01".
- ERROR065 IF ANY OF THE CHARACTERS WITHIN POSITION (E),(1.34) OR (S),(1.34) ARE NON BLANK - POSITION SHOULD BE ENTIRELY NON BLANK. (EDITORS NOTE: IF POSSIBLE , LEADING OR IMBEDDED BLANKS SHOULD BE FILLED IN. IF ONLY THE MINUTES OF A POSITION CAN'T BE DETERMINED , LEAVE DEGREES WITH BOTH SPACES FOR MINUTES BLANK.)
- ERROR066 IF THE PRESENT LEG END CODE IS "3" OR "4" ... AT LEAST ONE OCCURRENCE OF POSITION (1.34) FOR THIS UNIQUE DATE/SERIES (1.04/1.10) SHOULD BE NON BLANK.
- ERROR067 IF THE PRESENT OCCURRENCE OF SIGHTINGS (1.45) IS EQUAL TO "1" ... THE PRESENT OCCURRENCES OF TOT PORP SCHOOL (1.46) AND TOT OTHER MMS (1.48) SHOULD BE NON BLANK.
- ERROR068 IF THE PRESENT OCCURRENCE OF SIGHTINGS (1.45) IS EQUAL TO "2" ... THE PRESENT OCCURRENCES OF TOT PORP SCHOOL (1.46) AND TOT OTHER MMS (1.48) SHOULD BE BLANK.
- ERROR069 IF THE PRESENT OCCURRENCE OF TOT PORP SCHOOL (1.46) IS NON BLANK ... THE PRESENT OCCURRENCE OF SIGHTINGS(1.45) SHOULD BE EQUAL TO "1".
- ERROR070 IF THE PRESENT OCCURRENCE OF TOT OTHER MMS(1.48) IS NON BLANK ... THE PRESENT OCCURRENCE OF SIGHTINGS (1.45) SHOULD BE EQUAL TO "1".
- ERROR071 IF THE PRESENT OCCURRENCE OF TOT PORP SCHOOL (1.46) IS BLANK ... THE PRESENT OCCURRENCE OF SIGHTINGS (1.45) SHOULD BE EQUAL TO "2".
- ERROR072 IF THE PRESENT OCCURRENCE OF TOT OTHER MMS (1.48) IS BLANK ... THE PRESENT OCCURRENCE OF SIGHTINGS (1.45) SHOULD BE EQUAL TO "2".
- ERROR073 IF THE PRESENT OCCURRENCE OF SIGHTINGS (1.45) IS EQUAL "1" ... THE SUM OF THE PRESENT OCCURRENCES OF TOT PORP SCHOOL (1.46) AND TOT OTHER MMS (1.48) SHOULD BE GTR

THAN ZERO.

ERROR074 IF THE TIME END LEG (1.24) LESS THE TIME START LEG (1.14) IS GREATER THAN "0600" ... THIS MAY CONSTITUTE AN ERROR. (SETS A MAX. EXPECTED LEG LENGTH OF 6HRS.)

ERROR075 IF THE PRESENT OCCURANCE OF DATE(1.04) IS EQUAL TO THE PREVIOUS OCCURANCE OF DATE... THE PRESENT OCCURANCE OF TIME START LEG (1.14) SHOULD BE GTR THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME END LEG (1.24).

ERROR076 *****
 ***** EFFORT/SIGHTING CHECKS *****

ERROR077 IF THE PRESENT OCCURANCE OF DATE(S) (1.04) IS IDENTICAL TO THE PREVIOUS OCCURANCE OF DATE (E), (1.04) , AND THE PRESENT OCCURRENCE OF TIME OF SIGHTING (S), (1.18) IS GTR THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME START LEG (E), (1.14) AND LESS THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME END LEG (E), (1.24) ... THE PRESENT OCCURRENCES OF SERIES (S), (1.12) AND LEG (S), (1.14) SHOULD BE IDENTICAL TO THE PREVIOUS OCCURRENCES OF SERIES (E), (1.10) AND LEG (E), (1.12).

ERROR078 IF THE PRESENT OCCURANCE OF DATE(S) (1.04) IS IDENTICAL TO THE PREVIOUS OCCURANCE OF DATE (E), (1.04) , AND THE PRESENT OCCURRENCE OF TIME OF SIGHT (S), (1.18) IS GTR THAN THE PREVIOUS OCCURANCE OF TIME END LEG (E), (1.24) ... THE PRESENT OCCURANCES OF SERIES(S), (1.12) AND LEG (S), (1.14) SHOULD BE BLANK.

ERROR079 IF THE PRESENT OCCURANCE OF DATE(S) (1.04) IS IDENTICAL TO THE PREVIOUS OCCURANCE OF DATE (E), (1.04) , AND THE PRESENT OCCURRENCE OF TIME OF SIGHT (S), (1.18) IS GTR THAN THE PREVIOUS OCCURANCE OF TIME START LEG(E) (1.14) AND LESS THAN THE PREVIOUS OCCURRENCE OF TIME END LEG (E), (1.24) THE PRESENT OCCURRENCES OF SERIES(S), (1.12) AND LEG (S), (1.14) SHOULD BE NON BLANK.

ERROR080 IF THE PRESENT OCCURANCE OF DATE(S) (1.04) IS IDENTICAL TO THE PREVIOUS OCCURANCE OF DATE (E), (1.04) , AND THE PRESENT OCCURANCE OF TIME OF SIGHTING (S), (1.18) IS GTR THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME START LEG (E), (1.14) AND LESS THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME END LEG (E), (1.24) ... THE PREVIOUS OCCURRENCE OF SIGHTINGS (E), (1.45) SHOULD BE EQUAL TO '1'.

ERROR082 IF THE PRESENT RECORD IS A LEG OF EFFORT ... THE TOTAL NUMBER OF SIGHTING RECORDS WHERE 1) THE DATE(S), (1.04) , SERIES (S), (1.12) , AND LEG (S), (1.14) ARE IDENTICAL TO THE PRESENT DATE (E), (1.04), SERIES (E), (1.10), AND LEG (E), (1.12) AND 2) EITHER THE CREW SP1 CODE (S), (2.21), OR THE OBS SP1 CODE (S), (2.26) IS EQUAL TO ONE OF THE FOLLOWING VALUES : 02,03,05,06,10 THRU 15, 18,19,22,26,27,44,77,88, OR 90 SHOULD BE EQUAL TO THE PRESENT VALUE OF TOT PORP SCHOOL (E), (1.46).

ERROR083 IF THERE ARE SIGHTING RECORDS WHERE POSITION(S), (1.34) IS BLANK , BUT THESE RECORDS FALL WITHIN THE TIME SPAN OF A SERIES THAT HAS AT LEAST ONE NON BLANK OCCURANCE OF POSITION (E), (1.34) OR (S), (1.34) THE POSITION (S) FOR THESE SIGHTING RECORDS SHOULD BE PLOTTED AND

ENTERED ON THE SIGHTING RECORD.

ERROR084 IF THE PRESENT RECORD IS A LEG OF EFFORT ... THE TOTAL NUMBER OF SIGHTING RECORDS WHERE 1) THE DATE(S), (1.04) , SERIES (S), (1.12) , AND LEG (S), (1.14) ARE IDENTICAL TO THE PRESENT DATE (E), (1.04), SERIES (E), (1.10), AND LEG (E), (1.12) AND 2) EITHER THE CREW SP1 CODE (S), (2.21), OR THE OBS SP1 CODE (S), (2.26) IS NOT EQUAL TO ONE OF THE FOLLOWING VALUES : 02,03,05,06,10 THRU 15, 18,19,22,26,27,44,77,88, OR 90 SHOULD BE EQUAL TOXX THE PRESENT VALUE OF TOT OTHER MMS (E), (1.48).

ERROR085 IF THE PRESENT OCCURRENCE OF DATE(S), (1.04), SERIES(S), (1.12) , AND LEG (S), (1.14) ON THE SIGHTING ARE IDENTICAL TO THE PREVIOUS OCCURRENCE OF DATE (E), (1.04) SERIES (E), (1.10) , AND LEG (E), (1.12) ON THE EFFORT AND THE PREVIOUS OCCURRENCE OF LEG (E), (1.12) IS GTR THAN '01' THE PRESENT OCCURRENCE OF TIME OF SIGHTING(S) (1.18) SHOULD BE GREATER THAN THE PREVIOUS OCCURRENCE OF TIME START LEG (E), (1.14) AND LESS THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME END LEG (E), (1.24).

ERROR086 IF THE PRESENT OCCURANCES OF SERIES (S), (1.12) AND LEG (S), (1.14) ARE BLANK, AND THE LAST NON BLANK OCCURANCE OF DATE (S), (1.04), SERIES (S), (1.12), AND LEG (S), (1.14) IS IDENTICAL TO A FOLLOWING OCCURANCE OF DATE (S), SERIES (S), AND LEG (S) THE SERIES (S), AND LEG (S) FOR THE PRESENT SIGHTING SHOULD BE IDENTICAL TO THE LAST NON BLANK OCCURANCE OF SERIES (S) AND LEG (S) (EDITORS NOTE : SIGHTINGS WITH NO TIME, SERIES, OR LEG WHICH ARE IMBEDDED (BY SIGHTING OF THE DAY) BETWEEN 2 SIGHTINGS WITH THE SAME DATE, SERIES AND LEG SHOULD BE ASSIGNED A SERIES AND LEG NO. , AND SHOULD BE COUNTED AS TOT PORP SCHLS OR OTHER MMS IN THE APPROPRIATE LEG.

1979-1980 Marine Mammal Sightings Data (1979 format): BLANK and RANGE criteria and LOGICAL error criteria for both datafiles dependent upon the SIGHTINGS order.

1979-1980 Shipboard Marine Mammal Sighting Form
Data Element Blankness and Range Editing Specifications

Record 1 of 2

Data Element	Columns	Character type	Blankness OK?	Range Lower Upper	
Cruise Number	(1979) 1-3	N	No	450	590
	(1980)			570	700
Year	4-5	N	No	79*	80*
Month	6-7	N	No	1	12
Day	8-9	N	No	1	31
Sighting Number	10-11	N	No	1	10
Series Number	12-13	N	Yes	1	10
Leg Number	14-15	N	Yes	1	30
Record Number	16-17	N	No	1	1
Hr of sighting	18-19	N	No	6	18
Min of sighting	20-21	N	No	0	59
Sighting Q	22	N	No	1	6
Initial sighting	23	N	Yes	1	6
Bearing	24-26	N	No	0	359
Distance	27-29	N	No	1	100
Beaufort	30	N	No	0	6
Surf temp	31-33	N	No	550	890
Position:					
Lat. degrees	34-35	N	Yes	0	33
Lat. minutes	36-37	N	Yes	0	59
N-or-S (Hemisphere)	38	N	Yes	1	2
Long. degrees	39-41	N	Yes	80	139
Long. minutes	42-43	N	Yes	0	59
E-or-W (Hemisphere)	44	N	Yes	2	2
Source-of-position	45	N	Yes	1	4
Hr-MM-sighted	46-47	N	No	6	18
Min-MM-sighted	48-49	N	No	0	59
Set Number	50-52	N	Yes	1	125
Birds ? Y/N	53	N	No	1	2
Crew mn est schl	54-57	N	No	1	8000
Crew hi est schl	58-61	N	Yes	1	9999
Crew lo est schl	62-65	N	Yes	1	8000
Obs bst est schl	66-69	N	No	1	5000
Obs hi est schl	70-73	N	Yes	1	8000
Obs lo est schl	74-77	N	Yes	1	5000

*Each years' data was edited for that year.

A = Alpha

B = Blank

N = Numeric

1979-1980 Shipboard Marine Mammal Sighting Form
Data Element Blankness and Range Editing Specifications

Record 2 of 2

Data Element		Columns	Character type	Blankness OK?	Range	
					Lower	Upper
Cruise Number	(1979) (1980)	1-3	N	No	450 570	590 700
Year		4-5	N	No	79*	80*
Month		6-7	N	No	1	12
Day		8-9	N	No	1	31
Sighting Number		10-11	N	No	1	10
Series Number		12-13	N	Yes	1	10
Leg Number		14-15	N	Yes	1	30
Record Number		16-17	N	No	2	2
Crew spl percent		18-20	N	Yes	1	100
Crew spl code		21-22	N	Yes	2	98
Obs-spl-percent		23-25	N	Yes	1	100
Crew-spl-code		26-27	N	Yes	2	98
Crew-sp2-percent		28-30	N	Yes	0	99
Crew-sp2-code		31-32	N	Yes	2	98
Obs-sp2-percent		33-35	N	Yes	0	99
Obs-sp2-code		36-37	N	Yes	2	98
Crew-sp3-percent		38-40	N	Yes	0	98
Crew-sp3-code		41-42	N	Yes	2	98
Obs-sp3-percent		43-45	N	Yes	0	98
Obs-sp3-code		46-47	N	Yes	2	98
Crew-sp4-percent		48-50	N	Yes	0	97
Crew-sp4-code		51-52	N	Yes	2	98
Obs-sp4-percent		53-55	N	Yes	0	97
Obs-sp4-code		56-57	N	Yes	2	98
GBU		58	N	Yes	1	4

*Each years' data was edited for that year.

A = Alpha

B = Blank

N = Numeric

FOR MMEDIT79SL

```

ERROR001 *****
***** COMMENT *****
*****
CERTAIN NAMES (IE. POSITION , DATE , SERIES , LEG ,
ETC.) ARE DUPLICATED IN BOTH THE EFFORT AND SIGHTING
DATA BASES. THIS CAN BE A SOURCE OF CION ,ESPEC-
IALLY WHEN THE "COMMON" NAMES FROM TWO DIFFERENT
FORMAT TYPES ARE USED IN ONE ERROR MESSAGE. THIS
OCCURS MOST OFTEN IN THE EFFORT/SIGHTING CHECKS
SECTION OF THIS LISTING. CONSEQUENTLY, (E) AND (S)
HAVE BEEN USED AFTER CERTAIN DATA BASE ELEMENT NAMES
IN ORDER TO DENOTE FILE TYPE. AN (E) MEANS THE ELEMENT
IS FROM THE EFFORT RECORD FORMAT ; AN (S) MEANS
THE ELEMENT IS FROM THE SIGHTING RECORD FORMAT.
*****
***** SIGHTING CHECKS *****
*****
ERROR002 IF THE PRESENT OCCURRENCE OF DATE (1.04) IS IDENTICAL
TO THE PREVIOUS OCCURRENCE OF DATE ... THE PRESENT
OCCURRENCE IF SIGHT (1.10) SHOULD BE EQUAL TO THE
PREVIOUS OCCURRENCE OF SIGHT + 1.
ERROR003 IF THE PRESENT OCCURANCE OF DATE (1.04) IS NOT IDENT-
ICAL TO THE PREVIOUS OCCURANCE OF DATE ... THE PRESENT
OCCURANCE OF SIGHT (1.10) MUST BE EQUAL TO '01'.
ERROR004 IF THE PRESENT OCCURANCE OF SERIES (1.12) IS NON BLANK
... THE PRESENT OCCURANCE OF LEG (1.14) MUST BE NON
BLANK.
ERROR005 IF THE PRESENT OCCURANCE OF LEG (1.14) IS NON BLANK ..
THE PRESENT OCCURANCE OF SERIES (1.12) MUST BE NON
BLANK.
ERROR006 IF THE PRESENT OCCURANCE OF TIME OF SIGHTING (1.18) IS
BLANK ... THE PRESENT OCCURANCE OF BOTH SERIES (1.12)
AND LEG (1.14) SHOULD BE BLANK.
ERROR009 IF THE SIGHTING Q (1.22) IS GREATER THAN 1 AND LESS
THAN 7 ... THE DISTANCE(1.27) SHOULD BE LESS THAN 100.
ERROR010 IF THE BEAUFORT (1.30) NUMBER IS GREATER THAN 4 ...
THE DISTANCE (1.27) SHOULD NOT BE GREATER THAN 020.
ERROR011 IF NLATITUDE (1.34) IS NON BLANK ... N OR S (1.38)
SHOULD BE NON BLANK.
ERROR012 IF NLATITUDE (1.34) IS BLANK ... N OR S (1.38) SHOULD
BE BLANK.
ERROR013 IF NLONGITUDE (1.39) IS NON BLANK ... E OR W (1.44)
SHOULD BE NON BLANK.
ERROR014 IF NLONGITUDE (1.39) IS BLANK ... E OR W (1.44) SHOULD
BE BLANK.
ERROR015 IF POSITION (1.34) IS BLANK ... SOURCE OF POSITION
(1.45) SHOULD BE BLANK.
ERROR016 IF SET (1.50) IS NON BLANK ... THE FOLLOWING ELEMENTS
SHOULD BE NON BLANK : OBS BST EST SCHL (1.66) , OBS H1
EST SCHL (1.70) , OBS LO EST SCHL (1.74) , OBS SP1
PERCENT (2.23) , OBS SP1 CODE (2.26) , OBS SP2 PERCENT
(2.33) , OBS SP3 PERCENT (2.43) , OBS SP4 PERCENT
(2.53) , AND GBU (2.58).

```

ERROR017 IF THE PRESENT OCCURANCE OF SERIES (1.12) IS BLANK ...
 THE PRESENT OCCURANCE OF LEG (1.14) SHOULD BE BLANK.
 ERROR018 IF THE PRESENT OCCURANCE OF LEG (1.14) IS BLANK ...
 THE PRESENT OCCURANCE OF SERIES (1.12) SHOULD BE BLANK
 ERROR019 IF POSITION (1.34) IS NON BLANK ... SOURCE OF POSITION
 (1.45) SHOULD BE NON BLANK.
 ERROR020 IF THE PRESENT OCCURANCE OF N OR S (S), (1.38) IS NON
 BLANK , AND THE PRESENT OCCURANCE OF N OR S (S) IS NOT
 IDENTICAL TO THE LAST NON BLANK OCCURANCE OF N OR S
 (S)... THIS MAY CONSTITUTE AN ERROR.
 ERROR021 IF CREW H1 EST SCHL (1.58) IS NON BLANK ... BOTH CREW
 MN EST SCHL (1.54) , AND CREW LO EST SCHL (1.62)
 SHOULD BE NON BLANK.
 ERROR022 IF CREW H1 EST SCHL(1.58) IS NON BLANK ... CREW H1 EST
 SCHL SHOULD BE GREATER THAN CREW MN EST SCHL(1.54) AND
 GREATER THAN CREW LO EST SCHL (1.62).
 ERROR023 IF CREW LO EST SCHL (1.62) IS NON BLANK ... BOTH CREW
 MN EST SCHL (1.54) , AND CREW H1 EST SCHL(1.58) SHOULD
 BE NON BLANK.
 ERROR024 IF CREW LO EST SCHL(1.62) IS NON BLANK ... CREW LO EST
 SCHL SHOULD BE LESS THAN CREW MN EST SCHL (1.54) AND
 LESS THAN CREW H1 EST SCHL (1.58).
 ERROR025 IF ONE OF THE FOLLOWING ELEMENTS IS NON BLANK : CREW
 SP1 PERCENT(2.18), CREW SP2 PERCENT (2.28) , CREW SP3
 PERCENT(2.38), CREW SP4 PERCENT (2.48) ... EACH OF THE
 FOLLOWING ELEMNTS SHOULD BE NON BLANK .. CREW SP1
 PERCENT, CREW SP2 PERCENT, CREW SP3 PERCENT AND CREW
 SP4 PERCENT.
 ERROR026 IF ONE OF THE FOLLOWING ELEMENTS IS NON BLANK : CREW
 SP1 PERCENT(2.18), CREW SP2 PERCENT (2.28) , CREW SP3
 PERCENT (2.38) , CREW SP4 PERCENT ... THE SUM OF THE
 FOLLOWING ELEMENTS SHOULD BE EQUAL TO 100 : CREW SP1
 PERCENT, CREW SP2 PERCENT, CREW SP3 PERCENT, AND CREW
 SP4 PERCENT.
 ERROR027 IF THE SUM OF THE FOLLOWING ELEMENTS IS EQUAL TO ZERO,
 CREW SP1 PERCENT(2.18), CREW SP2 PERCENT (2.28) , CREW
 SP3 PERCENT(2.38), CREW SP4 PERCENT (2.48) ... EACH OF
 THE FOLLOWING ELEMENTS SHOULD BE BLANK : CREW SP1
 PERCENT, CREW SP2 PERCENT, CREW SP3 PERCENT, AND CREW
 SP4 PERCENT.
 ERROR028 IF OBS H1 EST SCHL(1.70) IS NON BLANK ... BOTH OBS BST
 EST SCHL (1.66) , AND OBS LO EST SCHL (1.74) SHOULD BE
 NON BLANK.
 ERROR029 IF OBS H1 EST SCHL (1.70) IS NON BLANK ... OBS H1 EST
 SCHL SHOULD BE GTR THAN OR EQUAL TO OBS BST EST SCHL
 (1.66) AND GREATER THAN OR EQUAL TO OBS LO EST SCHL
 (1.74).
 ERROR030 IF OBS LO EST SCHL(1.74) IS NON BLANK ... BOTH OBS BST
 EST SCHL (1.66) , AND OBS H1 EST SCHL (1.70) SHOULD BE
 NON BLANK.
 ERROR031 IF OBS LO EST SCHL (1.74) IS NON BLANK ... OBS LO EST
 SCHL SHOULD BE LESS THAN OR EQUAL TO OBS BST EST SCHL
 (1.66) AND LESS THAN OR EQUAL TO OBS H1 EST SCHL(1.70)
 ERROR032 IF ONE OF THE FOLLOWING ELEMENTS IS NON BLANK :OBS SP1
 PERCENT (2.23) , OBS SP2 PERCENT (2.33) , OBS SP3

PERCENT (2.43), OBS SP4 PERCENT (2.53) ... EACH OF THE FOLLOWING ELEMENTS SHOULD BE NON BLANK : OBS SP1 PERCENT, OBS PS2 PERCENT , OBS SP3 PERCENT , AND OBS SP4 PERCENT.

ERROR033 IF ONE OF THE FOLLOWING ELEMENTS IS NON BLANK :OBS SP1 PERCENT (2.23) , OBS SP2 PERCENT (2.33) , OBS SP3 PERCENT (2.43) , OBS SP4 PERCENT (2.53) ... THE SUM OF THE FOLLOWING ELEMENTS SHOULD BE EQUAL TO 100 :OBS SP1 PERCENT , OBS SP2 PERCENT , OBS SP3 PERCENT , AND OBS SP4 PERCENT.

ERROR034 IF THE SUM OF THE FOLLOWING ELEMENTS IS EQUAL TO ZERO: OBS SP1 PERCENT (2.23) , OBS SP2 PERCENT (2.33) , OBS SP3 PERCENT (2.43) ,OBS SP1 PERCENT (2.53) ... EACH OF THE FOLLOWING ELEMENTS SHOULD BE BLANK : OBS SP1 PERCENT, OBS SP2 PERCENT , OBS SP3 PERCENT , AND OBS SP4 PERCENT.

ERROR035 IF CREW SP1 PERCENT (2.18) IS GREATER THAN ZERO ... CREW SP1 CODE (2.21) SHOULD BE NON BLANK.

ERROR036 IF CREW SP2 PERCENT (2.28) IS GREATER THAN ZERO ... CREW SP1 PERCENT (2.18) SHOULD BE GTR THAN ZERO, AND THE ELEMENTS CREW SP1 CODE (2.21) AND CREW SP2 CODE (2.31) SHOULD BE NON BLANK.

ERROR037 IF CREW SP3 PERCENT(2.38) IS GREATER THAN ZERO ... THE ELEMENTS CREW SP2 PERCENT(2.28) , AND CREW SP1 PERCENT (2.18) SHOULD BE GREATER THAN ZERO , AND THE ELEMENTS CREW SP3 CODE (2.41) , CREW SP2 CODE (2.31) , AND CREW SP1 CODE (2.21) SHOULD BE NON BLANK.

ERROR038 IF CREW SP4 PERCENT(2.48) IS GREATER THAN ZERO ... THE ELEMENTS CREW SP3 PERCENT (2.38) , CREW SP2 PERCENT (2.28) , AND CREW SP1 PERCENT (2.18) SHOULD BE GREATER THAN ZERO , AND THE ELEMENTS CREW SP4 CODE(2.15), CREW SP3 CODE (2.41) , CREW SP2 CODE (2.31) , AND CREW SP1 CODE (2.21) SHOULD BE NON BLANK.

ERROR039 IF OBS SP1 PERCENT (2.23) IS GREATER THAN ZERO ... OBS SP1 CODE (2.26) SHOULD BE NON BLANK.

ERROR040 IF OBS SP2 PERCENT (2.33) IS GREATER THAN ZERO ... OBS SP1 PERCENT SHOULD BE GREATER THAN ZERO , AND THE ELEMENTS OBS SP2 CODE (2.36) AND OBS SP1 CODE (2.26) SHOULD BE NON BLANK.

ERROR041 IF OBS SP3 PERCENT (2.43) IS GREATER THAN ZERO ... THE ELEMENTS OBS SP2 PERCENT (2.33) AND OBS SP1 PERCENT (2.23) SHOULD BE GREATER THAN ZERO , AND THE ELEMENTS OBS SP3 CODE (2.46) , OBS SP2 CODE (2.36) AND OBS SP1 CODE (2.26) SHOULD BE NON BLANK.

ERROR042 IF OBS SP4 PERCENT (2.53) IS GREATER THAN ZERO ... THE ELEMENTS OBS SP3 PERCENT (2.43) , OBS SP2 PERCENT (2.33) AND OBS SP1 PERCENT (2.23) SHOULD BE GREATER THAN ZERO , AND THE ELEMENTS OBS SP4 CODE (2.56) , OBS SP3 CODE (2.46) , OBS SP2 CODE (2.36) AND OBS SP1 CODE (2.26) SHOULD BE NON BLANK.

ERROR043 IF OBS SP1 CODE (2.26) IS NON BLANK ... GBU (2.58) SHOULD BE NON BLANK.

ERROR044 IF OBS SP1 CODE (2.26) IS BLANK ... GBU (2.58) SHOULD BE BLANK.

ERROR045 IF THE PRESENT OCCURANCE OF SET (S)(1.50) IS NON BLANK

... THE PRESENT OCCURANCE OF SET (S) SHOULD BE GREATER THAN THE LAST NON BLANK OCCURANCE OF SET (S).

ERROR065 IF ANY OF THE CHARACTERS WITHIN POSITION (E), (1.34) OR (S), (1.34) ARE NON BLANK - POSITION SHOULD BE ENTIRELY NON BLANK. (EDITORS NOTE: IF POSSIBLE , LEADING OR IMBEDDED BLANKS SHOULD BE FILLED IN. IF ONLY THE MINUTES OF A POSITION CAN'T BE DETERMINED , LEAVE DEGREES WITH BOTH SPACES FOR MINUTES BLANK.)

ERROR076 *****
 ***** EFFORT/SIGHTING CHECKS *****

ERROR077 IF THE PRESENT OCCURANCE OF DATE(S) (1.04) IS IDENTICAL TO THE PREVIOUS OCCURANCE OF DATE (E), (1.04) , AND THE PRESENT OCCURRENCE OF TIME OF SIGHTING (S), (1.18) IS GTR THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME START LEG (E), (1.14) AND LESS THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME END LEG (E), (1.24) ... THE PRESENT OCCURRENCES OF SERIES (S), (1.12) AND LEG (S), (1.14) SHOULD BE IDENTICAL TO THE PREVIOUS OCCURRENCES OF SERIES (E), (1.10) AND LEG (E), (1.12).

ERROR078 IF THE PRESENT OCCURANCE OF DATE(S) (1.04) IS IDENTICAL TO THE PREVIOUS OCCURANCE OF DATE (E), (1.04) , AND THE PRESENT OCCURRENCE OF TIME OF SIGHT (S), (1.18) IS GTR THAN THE PREVIOUS OCCURANCE OF TIME END LEG (E), (1.24) ... THE PRESENT OCCURANCES OF SERIES(S), (1.12) AND LEG (S), (1.14) SHOULD BE BLANK.

ERROR079 IF THE PRESENT OCCURANCE OF DATE(S) (1.04) IS IDENTICAL TO THE PREVIOUS OCCURANCE OF DATE (E), (1.04) , AND THE PRESENT OCCURRENCE OF TIME OF SIGHT (S), (1.18) IS GTR THAN THE PREVIOUS OCCURANCE OF TIME START LEG(E) (1.14) AND LESS THAN THE PREVIOUS OCCURRENCE OF TIME END LEG (E), (1.24) THE PRESENT OCCURRENCES OF SERIES(S), (1.12) AND LEG (S), (1.14) SHOULD BE NON BLANK.

ERROR080 IF THE PRESENT OCCURANCE OF DATE(S) (1.04) IS IDENTICAL TO THE PREVIOUS OCCURANCE OF DATE (E), (1.04) , AND THE PRESENT OCCURRENCE OF TIME OF SIGHTING (S), (1.18) IS GTR THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME START LEG (E), (1.14) AND LESS THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME END LEG (E), (1.24) ... THE PREVIOUS OCCURRENCE OF SIGHTINGS (E), (1.45) SHOULD BE EQUAL TO '1'.

ERROR082 IF THE PRESENT RECORD IS A LEG OF EFFORT ... THE TOTAL NUMBER OF SIGHTING RECORDS WHERE 1) THE DATE(S), (1.04) , SERIES (S), (1.12) , AND LEG (S), (1.14) ARE IDENTICAL TO THE PRESENT DATE (E), (1.04), SERIES (E), (1.10), AND LEG (E), (1.12) AND 2) EITHER THE CREW SP1 CODE (S), (2.21), OR THE OBS SP1 CODE (S), (2.26) IS EQUAL TO ONE OF THE FOLLOWING VALUES : 02,03,05,06,10 THRU 15, 18,19,22,26,27,44,77,88, OR 90 SHOULD BE EQUAL TO THE PRESENT VALUE OF TOT PORP SCHOOL (E), (1.46).

ERROR083 IF THERE ARE SIGHTING RECORDS WHERE POSITION(S), (1.34) IS BLANK , BUT THESE RECORDS FALL WITHIN THE TIME SPAN OF A SERIES THAT HAS AT LEAST ONE NON BLANK OCCURANCE OF POSITION (E), (1.34) OR (S), (1.34) THE POSITION (S) FOR THESE SIGHTING RECORDS SHOULD BE PLOTTED AND

ENTERED ON THE SIGHTING RECORD.

ERROR084 IF THE PRESENT RECORD IS A LEG OF EFFORT ... THE TOTAL NUMBER OF SIGHTING RECORDS WHERE 1) THE DATE(S), (1.04) , SERIES (S), (1.12) , AND LEG (S), (1.14) ARE IDENTICAL TO THE PRESENT DATE (E), (1.04), SERIES (E), (1.10), AND LEG (E), (1.12) AND 2) EITHER THE CREW SP1 CODE (S), (2.21), OR THE OBS SP1 CODE (S), (2.26) IS NOT EQUAL TO ONE OF THE FOLLOWING VALUES : 02,03,05,06,10 THRU 15, 18,19,22,26,27,44,77,88, OR 90 SHOULD BE EQUAL TOXX THE PRESENT VALUE OF TOT OTHER MMS (E), (1.48).

ERROR085 IF THE PRESENT OCCURRENCE OF DATE(S), (1.04), SERIES(S), (1.12) , AND LEG (S), (1.14) ON THE SIGHTING ARE IDENTICAL TO THE PREVIOUS OCCURRENCE OF DATE (E), (1.04) SERIES (E), (1.10) , AND LEG (E), (1.12) ON THE EFFORT AND THE PREVIOUS OCCURRENCE OF LEG (E), (1.12) IS GTR THAN '01' THE PRESENT OCCURRENCE OF TIME OF SIGHTING(S) (1.18) SHOULD BE GREATER THAN THE PREVIOUS OCCURRENCE OF TIME START LEG (E), (1.14) AND LESS THAN OR EQUAL TO THE PREVIOUS OCCURRENCE OF TIME END LEG (E), (1.24).

ERROR086 IF THE PRESENT OCCURRENCES OF SERIES (S), (1.12) AND LEG (S), (1.14) ARE BLANK, AND THE LAST NON BLANK OCCURRENCE OF DATE (S), (1.04), SERIES (S), (1.12), AND LEG (S), (1.14) IS IDENTICAL TO A FOLLOWING OCCURRENCE OF DATE (S), SERIES (S), AND LEG (S) THE SERIES (S), AND LEG (S) FOR THE PRESENT SIGHTING SHOULD BE IDENTICAL TO THE LAST NON BLANK OCCURRENCE OF SERIES (S) AND LEG (S) (EDITORS NOTE : SIGHTINGS WITH NO TIME, SERIES, OR LEG WHICH ARE IMBEDDED (BY SIGHTING OF THE DAY) BETWEEN 2 SIGHTINGS WITH THE SAME DATE, SERIES AND LEG SHOULD BE ASSIGNED A SERIES AND LEG NO. , AND SHOULD BE COUNTED AS TOT PORP SCHLS OR OTHER MMS IN THE APPROPRIATE LEG.

1979-1980 Non-Porpoise, and 1979 and 1980 Porpoise Set Log and Tally Forms. The 1979 and 1980 Porpoise Set Log Forms are different in appearance, but the data formats are identical.

CRUISE			SET			CARD			DATE			POSITION		LONGITUDE		SET TYPE	
#			#			#			YEAR	MONTH	DAY	LATITUDE	N S			E W	
1			4			0	1		9			13				25	

BIRDS?				ENVIRONMENTAL CONDITIONS AT TIME TOWLINE IN					
$\frac{Y}{N}$	TIME BIRDS SIGHTED	DISTANCE (nm & 10ths.)	TOTAL NUMBER OF BIRDS	WIND (KTS.)	WIND BEARING	SWELL (FT.)	TIME NET LET GO	TIME RINGS UP	NUMBER BUNCHES
28	29	33	36	40	42	45	47	51	55

SACKING UP?			BRAILING?			TONS LOADED						OTHER FISH CODE
$\frac{Y}{N}$	TIME START		$\frac{Y}{N}$	TIME START BRAILING	TIME END BRAILING	TIME SET FINISHED	TONS YF	TONS SK	TONS OTHER	FISH CODE		
			0	2								
56	57	60	7	9	10	14	18	22	25	28	31	

Answer each question by entering appropriate code: 1 = YES 2= NO

Y:N
33

1. Fish loss over corks after rings up? If yes describe below

Y/N
34

2. Was any gear modified for schoolfishing this set? If yes describe below

Y.M.
39

3. Was a strong current present at any time during this set?

Notes (continue on back)

CRUISE #	SET #	CARD #	DATE			POSITION OF SET			E	W	SET TYPE	TIME CHASE BEGAN	# SPOTS USED
			YEAR	MONTH	DAY	LATITUDE	N	S					
		01											
1	4	7	9	11	13	15	19	20	25	26	28	32	

ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET

TOTAL NUMBER	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	NAME	CODE
33	37	40	43	46		49
51	55	58	61	64		67 68

OTHER SPECIES STOCK (1):

OTHER SPECIES STOCK (2):

SPINNER STOCK:

OVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET

TIME OF ESTIMATE	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION					
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
	25	29	33	37	40	43	46	49	52

POTTED STOCK: CODE OTHER SPINNER: CODE OTHER SPECIES STOCK (1): CODE OTHER SPECIES STOCK (2): CODE

(Conditions; chase and behavior before net let go, etc.)

TIME NET LET GO	Y	N	NUMBER	MAJOR SPECIES STOCK EVADED SET:	CODE

(Cont. on pg. 11 & 12)

OVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS AT TIME OF ENCIRCLEMENT

TIME OF ESTIMATE	CARD #	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION					
		BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
	03									
	7	9	13	17	21	24	27	30	33	36

TOTAL STOCK: CODE OTHER SPINNER: CODE OTHER SPECIES STOCK (1): CODE OTHER SPECIES STOCK (2): CODE

1979 MARINE MAMMAL SET LOG

CRUISE # _____

NOAA - U.S. DEPT. OF COMM.

SET # _____

Page 2

CONDITIONS AT TIME TOWLINE IN

WIND (KTS)	WIND BEARING	SWELL (FT)
47	49	52

CONDITIONS AT TIME RINGS BREAK WATER

TIME RINGS UP
54

ESCAPED BEFORE RINGS UP ?

Y/N	NUMBER
58	59

MAJOR SPECIES/STOCK:

CODE
63

CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED

TOTAL CAUGHT	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
65	69	72	75	78
11	15	18	21	24
29	33	36	39	42

OTHER SPECIES/STOCK (1):

NAME

CARD #	CODE
04	7

OTHER SPECIES/STOCK (2):

NAME

CODE
27

SPINNER STOCK:

NAME

OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED

TOTAL CAUGHT (ALL SPECIES)

PERCENT SPECIES COMPOSITION

TIME OF ESTIMATE

BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
45	49	53	57	60	63	66	69	72

SPOTTED STOCK:

CODE
75

OTHER SPINNER:

CODE
77

OTHER SPECIES/STOCK (1):

CODE	CARD #
79	05

OTHER SPECIES/STOCK (2):

CODE

CONDITIONS PRIOR TO BACKDOWN

MANNED SPDBTS #
11

SPDBTS TOW? Y/N/NA
12

NET COLLAPSE? Y/N/NA
13

KILL DUE TO NET COLLAPSE? Y/N/NA
14

SPDBTS INFLUENCE MARINE MAMMALS? Y/N/NA
15

SPDBTS ADJUST BD AREA? Y/N/NA
16

LIVE MARINE MAMMALS RELEASED AND/OR ESCAPED PRIOR TO BACKDOWN

RESCUE EFFORT?

Y/N	# RESCUES	RAFT? Y/N	SPDBT? Y/N	SP-M? Y/N	OTHER? Y/N
17	18	20	21	22	23

LIVE RELEASED BEFORE BACKDOWN
24

NOTES:

ESCAPED AFTER RINGS UP ?

Y/N	NUMBER
27	28

(Continued on pg. 11 & 12)

1979 MARINE MAMMAL SET LOG

CRUISE # _____ NOAA - U.S. DEPT. OF COMM.

Page 3

SET # _____

DOWN - IF NO BACKDOWN, ANSWER Y/N BACKDOWN AND THEN GO TO RELEASED AND/OR ESCAPED AFTER BACKDOWN

BACKDOWN?				OBSERVERS ESTIMATE OF MARINE MAMMALS RELEASED BECAUSE OF BACKING DOWN.				FISH LOSS DURING BACKDOWN?		CANOPIES?		KILL DUE TO CANOPIES?	
TIME START	# BOW PUNCHES	SUNDOWN?	LIGHTS?	PANEL COVER	TIEDOWN?	TIME END B.D.	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	Y/N	~ TONS	Y/N	Y/N/NA
32													
36													
37													
38													
39													
40													
41													
45													
49													
53													
57													
58													
61													
62													

MARINE MAMMALS RELEASED BY OTHER METHODS DURING BACKDOWN
NOT INCLUDE THOSE ANIMALS THAT WERE BACKED OUT.

WEATHER DURING B.D. CHOP HEIGHT WIND SPEED SWELL HEIGHT

RESCUE EFFORT?

NOTES:

# RESCUERS	SPDBT?	RAFT?	FACE MASK?	SWIMMER?	OTHER?	# LIVE HAND RELEASED
Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
64						
66						
67						
68						
69						
70						
71						

TALLY SHEET

RECORD ALL DEAD (X) AND ALL UNDETERMINED STATUS (?) AND (O) DURING SET ON TALLY SHEET.
RECORD ALL LIVE (+ AND (O)) THAT OCCUR AFTER BACKDOWN ON TALLY SHEET, AND SUMMARIZE BELOW.
IF NO BACKDOWN, RECORD ALL ANIMALS ON TALLY SHEET, AND SUMMARIZE LIVE (+ AND (O)) BELOW.

# LIVE IN NET AFTER B.D.	CARD #
74	06
76	
7	

MARINE MAMMALS RELEASED AND/OR ESCAPED AFTER BACKDOWN
IF NO BACKDOWN OCCURRED, ACCOUNT FOR ALL LIVE ANIMALS RELEASED DURING THE SET IN THIS SECTION.
THIS IS A SUMMARY OF ALL LIVE ANIMALS ON THE TALLY SHEET (+ AND (O)). RECORD EXPLICIT NOTES.

RAFT RESCUE EFFORT?

# MEN	# LIVE RELEASED
Y/N	Y/N
9	
10	
11	

SPELBOAT RESCUE EFFORT?

# MEN	# LIVE RELEASED
Y/N	Y/N
14	
15	
16	

SWIMMER RESCUE EFFORT?

# MEN	# LIVE RELEASED
Y/N	Y/N
19	
20	
21	

OTHER METHOD(S) OF RESCUE EFFORT?

# MEN	# LIVE RELEASED
Y/N	Y/N
24	
25	
26	

TOTAL NUMBER OF RESCUERS AFTER BACKDOWN

29

RELEASED LIVE OVER DECK?

ESCAPED?

NOTES:

NUMBER
Y/N
31
32

NUMBER
Y/N
35
36

(Cont. on pg. 11 & 12)

SACKING UP?

BRAILING?

TIME START	# LIVE IN NET AT START	SACK RESCUE EFFORT?	# LIVE RELEASED
Y/N	Y/N	Y/N	Y/N
39			
40			
44			
47			
48			
49			

TIME START	# LIVE IN NET AT START	TIME END
Y/N	Y/N	Y/N
52		
53		
57		
60		

FINISH SET TIME

64

STRONG CURRENT THIS SET?

TOTAL KNOWN MARINE MAMMAL KILL (ADD 1)

TOTAL INJURED

TONS YF

TONS SK

CARD #

TONS OTHER

OTHER FISH CODE

68

69

73

75	78	80	7	9
----	----	----	---	---

12

1979 MARINE MAMMAL SET LOG

CRUISE # _____
SET # _____

PHYSICAL CAUSES OF MORTALITY

DESCRIBE AND DISCUSS MORTALITY: _____

PERCENTAGE OF ALL MARINE MAMMALS KILLED:

	% SPOTTED KILLED	% SPINNER KILLED	% ALL OTHER KILLED
ENTANGLEMENT	14	17	20
ENTRAPMENT	23	25	29
SACKED-UP	32	35	38
OTHER	41	44	47
UNKNOWN	50	53	56
OTHER SPECIES/STOCK			
NAME			CODE 59

(Cont. on pg. 11 & 12)

OPERATIONAL MALFUNCTIONS

EQUIPMENT MALFUNCTIONS?	MALFUNCTIONS DELAY SET?	MARINE MAMMALS IN NET DURING MALFUNCTION?
Y N	Y/N/NA ~MINUTES	Y/N/NA
61	62 63	66

SET ABORTED?
Y N
TIME
67 68

NET DUMP?
Y N
TIME
72 73 76

DESCRIBE MALFUNCTION(S) IN ORDER OF OCCURRENCE

	OCCURRED	TIME	FIXED	ESTIMATED DELAY IN MINUTES	NOTES: (TYPE OF MALFUNCTION, HOW, WHY)
1					
2					
3					
4					

⊕ = ESCAPED OR RELEASED ALIVE
BUT INJURED

[illegible]

STOTALS

Spotted Stock Name _____ Other Spinner Name _____ Other Species/Stock (1) Name _____ Other Species/Stock (2) Name _____

1979 MARINE MAMMAL SET LOG

BEHAVIORAL SUMMARY

OBSERVATIONS DURING CHASE (i.e., free running, jumping, evasion, etc.)

OBSERVATIONS IN NET (i.e., rafting, diving, jumping, cohesiveness, groups, etc.)

OBSERVATIONS DURING BACKDOWN (i.e., sleeping, "swimming uphill," cohesiveness, etc.)

OBSERVATIONS AFTER BACKDOWN (i.e., reaction to rescue effort, diving, cohesiveness, etc.)

1979 MARINE MAMMAL SET LOG

1. SCHOOL COMPOSITION OBSERVATIONS

Lined area for School Composition Observations.

2. OBSERVATIONS ON USE OF SPEEDBOATS

Lined area for Observations on Use of Speedboats.

3. BACKDOWN OBSERVATIONS

Lined area for Backdown Observations.

4. OBSERVATIONS ON SAFETY PANEL POSITION DURING BACKDOWN

Lined area for Observations on Safety Panel Position during Backdown.

5. BOW BUNCH OBSERVATIONS

6. OBSERVATIONS ON USE OF LIGHTS DURING BACKDOWN

7. OBSERVATIONS ON TWO RESCUERS AND CONTINUOUS HAND REMOVAL

8. OBSERVATIONS ON USE OF RUBBER RAFT, FACEMASK, AND SNORKEL

9. BRAILING OBSERVATIONS

1979 MARINE MAMMAL SET LOG

CRUISE # _____ NOAA - U.S. DEPT. OF COMM.

SET # _____

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SYMBOLS

INDICATE TIME AND EVENT
(Operations, Malfunction, Rescue,
Net Collapse, Mortality, etc.)

TIME

LOCATION OF PSP AT B.D.

- X PORPOISE
- E ENTANGLEMENT
- W ← WIND DIRECTION
- D ← CURRENT DIRECTION
- C CANOPY
- N NET COLLAPSE
- S CORKLINE SINKAGE
- PSP PORPOISE SAFETY PANEL
- R PORPOISE RESCUE OR RELEASE
- ⊘ BOW BUNCH
- Ⓢ SKIFF
- ▷ SPEEDBOAT
- ▷ SPEEDBOAT OR TENDER INVOLVED IN HAND RELEASE
- Ⓢ SWIMMERS
- ⌋ ▷ SPEEDBOAT ATTACHED BUT NOT TOWING
- ⌋ ▷ TOWING FROM STERN
- ⌋ ▷ TOWING FROM BOW
- ⌋ ▷ TOWING ONE BUNCH
- ⌋ ▷ TOWING TWO BUNCHES
- ⌋ ▷ TOWING ON CORKLINE
- Ⓡ RAFT
- Ⓜ MANNED SPEEDBOAT

ENTER ADDITIONAL SYMBOLS
YOU USE:

NOTES:

TIME

TIME

NOTES:

NOTES:

TIME

TIME

NOTES:

NOTES:

1979 MARINE MAMMAL SET LOG

TIME

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NOTES:

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TIME

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NOTES:

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TIME

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NOTES:

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TIME

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NOTES:

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TIME

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NOTES:

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TIME

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NOTES:

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1979 MARINE MAMMAL SET LOG

CRUISE # _____ NOAA - U.S. DEPT. OF COMM.

SET # _____

Page 11

NOTES ON THIS SET (NOTE TIMES):

Lined area for notes.

1979 MARINE MAMMAL SET LOG

CRUISE # _____ NOAA - U.S. DEPT. OF COMM.

SET # _____

Page 12

CONTINUATION OF NOTES ON THIS SET (NOTE TIMES):

SKIPPER COMMENTS

PORPOISE SET LOG / TALLY SUMMARY

CR. NO.	SET NO.
1	4

CARD			NEONATE			2-TONE			SPECKLED			MOTTLED			ADULT			AGE UNK. SPOT.
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	
7	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54		

EASTERN			WHITEBELLY			UNID. SPIN.			CARD			OTHER SPECIES 1			OTHER SPECIES 2			UNID.
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	
57	60	63	66	69	72	75	78	7	9	12	15	18	21	24	27	30		

NEONATE			2-TONE			SPECKLED			MOTTLED			ADULT			AGE UNK. SPOT.	
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		
33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78	

EASTERN			WHITEBELLY			UNID. SPIN.			OTHER SPECIES 1			OTHER SPECIES 2			UNID.	
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		
7	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54

NEONATE			2-TONE			SPECKLED			CARD			MOTTLED			ADULT			AGE UNK. SPOT.
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	
57	60	63	66	69	72	75	78	7	9	12	15	18	21	24	27	30		

EASTERN			WHITEBELLY			UNID. SPIN.			OTHER SPECIES 1			OTHER SPECIES 2			UNID.	
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		
33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78	

NEONATE			2-TONE			SPECKLED			MOTTLED			ADULT			AGE UNK. SPOT.	
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		
7	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54

EASTERN			WHITEBELLY			UNID. SPIN.			CARD			OTHER SPECIES 1			OTHER SPECIES 2			UNID.
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	
7	60	63	66	69	72	75	78	7	9	12	15	18	21	24	27	30		

NEONATE			2-TONE			SPECKLED			MOTTLED			ADULT			AGE UNK. SPOT.	
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		
3	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78	

EASTERN			WHITEBELLY			UNID. SPIN.			OTHER SPECIES 1			OTHER SPECIES 2			UNID.	
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		
9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	

Other Sp. 1 Code	Other Sp. 2 Code	Spotted Code	Other Spinner Code
57	59	61	63

Recorded by _____

1980 MARINE MAMMAL SET LOG

CRUISE #	SET #	CARD #	DATE			POSITION OF SET		SET TYPE	TIME CHASE BEGAN	SPDBTS USED			
			YEAR	MONTH	DAY	LATITUDE	LONGITUDE						
5000	001	01	79	05	01	06	31	11	05	00	202	0945	4
1	4	7	9	11	13	15	19	20	25	26	28		32

ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET

TOTAL NUMBER	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES/STOCK (1):	CODE
1000	1000	0000	0000	0000	NAME Porpoise	49
33	37	40	43	46		
1500	0000	0000	1000	0000	OTHER SPECIES/STOCK (2):	CODE
51	55	58	61	64		67 68
CARD #					SPINNER STOCK:	
02	1000	1000	0000	0000	NAME	
7	9	13	16	19	22	

SERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET

TIME OF ESTIMATE	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION						CODE
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	
1012	0800	1000	0500	1000	0000	0000	0000	0000	0000	
	25	29	33	37	40	43	46	49	52	
SPOTTED STOCK:	CODE	OTHER SPINNER:	CODE	OTHER SPECIES/STOCK (1):	CODE	OTHER SPECIES/STOCK (2):	CODE			
ESHOE	55		57		59		61			

CONDITIONS, CHASE AND BEHAVIOR BEFORE NET LET GO, i.e., FREE RUNNING, JUMPING, EVASION, ETC.)

As we approached school was milling around, many birds diving and picking, 7 man-o-wars. As SPBTS approached school moved off, much low running some leaping and splashing. Falcate dorsal fins, dark grey capes light grey ventrally. Snouts present #3 SPBT broke down, continuing with 3 SPBTS. School coming around in tight group and is slowing down as it approaches the wake of the main vessel, 1 group of 30 spotters through the wake past the stern (1030). As school was running in noticed a group of spinners ~15 at tail end of school

TIME NET LET GO	EVASION SET?	MAJOR SPECIES/STOCK EVASION SET:	CODE
Y	N	NUMBER	
1032	1	0030	S. attenuata (offshore)
63	67	68	72 73

(Cont. on pg. 8)

SERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS AT TIME OF ENCIRCLEMENT

TIME OF ESTIMATE	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION						CODE	
	CARD #	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)		% OTHER SPECIES (2)
1038	03	0700	0900	0500	1000	0000	0000	0000	0000	0000	
	7	9	13	17	21	24	27	30	33	36	
SPOTTED STOCK:	CODE	OTHER SPINNER:	CODE	OTHER SPECIES/STOCK (1):	CODE	OTHER SPECIES/STOCK (2):	CODE				
ESHOE	39		41		43		45				

1980 MARINE MAMMAL SET LOG

CRUISE # 500
 SET # 001

CONDITIONS AT TIME TOWLINE IN

WIND (KTS)	WIND BEARING	SWELL (FT)
0.6	2.7	0.2
47	49	52

CONDITIONS AT TIME RINGS BREAK WATER

ESCAPED BEFORE RINGS UP?

TIME RINGS UP
1.1.0.3
54

Y/N	NUMBER	MAJOR SPECIES/STOCK: (OFFSHORE)	CODE
1	0.0.5.2	<u>S. attenuata</u>	63
58	59		

CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED

TOTAL CAUGHT	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
1.0.0.0	1.0.0	0.0.0	0.0.0	0.0.0
45	69	72	75	80
0.5.0.0	1.0.0	0.0.0	0.0.0	0.0.0
11	15	18	21	24
(SKIP) 0.9.0.0	1.0.0	0.0.0	0.0.0	0.0.0
29	33	36	39	42

OTHER SPECIES/STOCK (1):	CARD #	CODE
	04	
NAME	7	9
OTHER SPECIES/STOCK (2):		CODE
NAME		27
SPINNER STOCK:		
NAME		

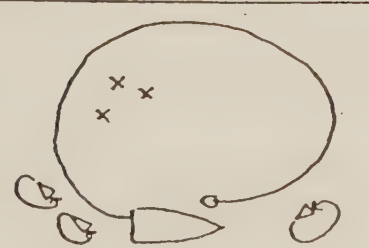
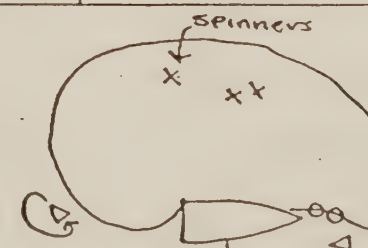
OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED

TIME OF ESTIMATE	TOTAL CAUGHT (ALL SPECIES)			PERCENT SPECIES COMPOSITION					
1120	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
	0.6.0.0	0.7.0.0	0.5.0.0	0.9.9	0.0.0	0.0.1	0.0.0	0.0.0	0.0.0
	45	49	53	57	60	63	66	69	72

SPOTTED STOCK:	CODE	OTHER SPINNER:	CODE	OTHER SPECIES/STOCK (1):	CODE	CARD #	OTHER SPECIES/STOCK (2):	CODE
OFFSHORE						0.5		
75		77		79	80	7	9	

OBSERVATIONS IN NET (i.e., RAFTING, DIVING, JUMPING, COHESIVENESS, SCHOOL COMPOSITION, GROUPS, ETC.)

In the net the spotters were rafting and diving, they mingled in a loose group. The spinners were moving around the outside edges of the group with a slow rolling and diving behavior. They stayed together and surfaced 6 abreast to breathe.

TIME	ENCIRCLEMENT	TIME	RINGS UP
1038		1103	

NOTES: Porpoise staying low only a few dorsal fins visible

NOTES: 2 bunches pulled, pulling 3rd

1980 MARINE MAMMAL SET LOG

CRUISE # 500 NOAA - U.S. DEPT. OF COMM.
SET # 001 Page 3

CONDITIONS PRIOR TO BACKDOWN

ANNOUNCED SPDBTS #	SPDBTS TOW? Y/N/NA	NET COLLAPSE? Y/N/NA	KILL DUE TO NET COLLAPSE? Y/N/NA	SPDBTS INFLUENCE MARINE MAMMALS? Y/N/NA	SPDBTS ADJUST BD AREA? Y/N/NA
<u>2</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>
11	12	13	14	15	16

MARINE MAMMALS RELEASED AND/OR ESCAPED PRIOR TO BACKDOWN

RESCUE EFFORT?						# LIVE RELEASED BEFORE BACKDOWN	ESCAPED AFTER RINGS UP?	
Y	N	#	RAFT?	SPDBT?	SWIM?		Y	NUMBER
2						0,0,1	2	
17	18	20	21	22	23	24	27	29

NOTES: USE OF SPEEDBOATS

SPDBTS. remained out contin-
uously from encirclement to
tiedown. Used to circle at the stern.
the other to tend bunches. 1 SPDBT was
used at BD apex during BD the other
came aboard at tiedown.

BACKDOWN - IF NO BACKDOWN, ANSWER Y/N BACKDOWN AND THEN GO TO RELEASED AND/OR ESCAPED AFTER BACKDOWN

BACKDOWN?										OBSERVERS ESTIMATE OF MARINE MAMMALS RELEASED BECAUSE OF BACKING DOWN			FISH LOSS DURING BACKDOWN?		KILL DUE TO CANOPIES?	
Y	N	TIME START	BOW DITCHES IN/OUT?	SUNDOWN?	LIGHTS?	PANEL COVER Y/N	TIEDOWN? Y/N/NA	TIME END B.D.	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	Y	N	~TONS	Y	N
1		1,1,3,5	3	2	2	1	1	1,1,4,3	0,6,2,0	0,6,8,0	0,6,0,0	2		1	2	3
31	32	36	37	38	39	40	41	45	49	53	57	58	61	62		

MARINE MAMMALS RELEASED BY OTHER METHODS DURING BACKDOWN DO NOT INCLUDE THOSE ANIMALS THAT WERE BACKED OUT.

RESCUE EFFORT?										# LIVE HAND RELEASED
Y	N	#	RAFT?	SPDBT?	FACE MASK?	SWIMMER?	OTHER?	Y	N	
1		0,3	1	1	1	2	2	0,0,1		
63	64	66	67	68	69	70	71			

NOTES: LIGHTS, RAFT, FACE MASK, SWIMMER

1 man in SPDBT released 1 at apex and pushed
others by. raft launched at tiedown w/2
men used to keep porpoise toward apex of BD
channel. 1 raftman used FM/S, looked in net
3 or 4 times during BD and twice after.

MARINE MAMMAL BEHAVIOR DURING BACKDOWN SLEEPING, "SWIMMING UPHILL," COHESIVENESS, ETC.

At start of BD the porpoise were all near the apex and
most went out when the corks first sank. 1 spinner swam
back up the channel and got behind the raft, therefore
was not released during the BD operation.

TIME	TIEDOWN:	TIME	BACKDOWN:
1135	BOW BUNCHES, PANEL COVER, APRON POSITION	1138	RESCUE EFFORT, MAMMAL INVOLVEMENT

1980 MARINE MAMMAL SET LOG

CRUISE # 500
SET # 001

LIVE MARINE MAMMALS RELEASED AND/OR ESCAPED AFTER BACKDOWN
IF NO BACKDOWN OCCURRED, ACCOUNT FOR ALL LIVE ANIMALS RELEASED DURING THE SET IN THIS SECTION.
THIS IS A SUMMARY OF ALL LIVE ANIMALS ON THE TALLY SHEET (+ AND ⊙). RECORD EXPLICIT NOTES.

# LIVE IN NET AFTER B.D.	CARD #
0, 0, 1	06
74	76

RAFT RESCUE EFFORT?		
Y	N	# LIVE RELEASED
1	2	0, 0, 0
9	10	11

SPEEDBOAT RESCUE EFFORT?		
Y	N	# LIVE RELEASED
2		
14	15	16

SWIMMER RESCUE EFFORT?		
Y	N	# LIVE RELEASED
1	1	0, 0, 1
19	20	21

OTHER METHOD(S) OF RESCUE EFFORT?		
Y	N	# LIVE RELEASED
2		
24	25	26

TOTAL NUMBER OF RESCUERS AFTER BACKDOWN
0, 2
29

RELEASED LIVE OVER DECK?

Y	N	NUMBER
2		
31	32	

ESCAPED?

Y	N	NUMBER
2		
35	36	

NOTES: (INCLUDE RESCUER DEPLOYMENT AND HAND REMOVAL)

After 30 2 men in raft following spinner as net reduced by net rolling. 1 man dove in from raft and hand released porpoise over corks. Back in raft used FM/S to check net, signals all clear

TIMES:

1145	1 W.B. Spinner in net, men chasing it
1152	1 man from raft jumps in and releases spinner
1155	SPOT: picked up raft + 2 rescuers

TALLY SHEET

RECORD ALL DEAD (✓) AND ALL UNDETERMINED STATUS (?) AND ⊙ DURING SET ON TALLY SHEET.
RECORD ALL LIVE (+ AND ⊙) THAT OCCUR AFTER BACKDOWN ON TALLY SHEET, AND SUMMARIZE ABOVE.
IF NO BACKDOWN, RECORD ALL ANIMALS ON TALLY SHEET, AND SUMMARIZE LIVE (+ AND ⊙) ABOVE.

	SPOTTED												SPINNERS						OTHER SPECIES (1)			OTHER SPECIES (2)			UNID							
	NEONATE			TWO-TONE			SPECKLED			MOTTLED			ADULT			AGE	EASTERN			WHITEBELLY			UNID									
	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	UNK	M	F	?	M	F	?	M	F		?	M	F	?	M	F	?
DUMPED															?							+										
PROCESSED											✓											✓										
✓											!											!										
•																						!										
⊙																																
?																																
⊙																																

Spotted stock: offshore Other Spinner name: Unidentified

1980 MARINE MAMMAL SET LOG

CRUISE # 500 NOAA - U.S. DEPT. OF COMM.
SET # 001 Page 5

SACKING UP?				BRAILING?				FINISH SET TIME	
TIME START	# LIVE IN NET AT START	SACK RESCUE EFFORT?	# LIVE RELEASED	Y/N	TIME START	# LIVE IN NET AT START	TIME END		
11:20:5	0,0,0	2			11:21:9	0,0,0	12:37	12:58	
44	47	48	49	52	53	57	60	64	

STRONG CURRENT THIS SET?	TOTAL KNOWN MARINE MAMMAL KILL (ADD %)	TOTAL INJURED	TONS YF	TONS SK	CARD	TONS OTHER	OTHER FISH CODE
Y/N							
2	0,0,0,2	0,2	0,2,2	0,0,0	0,7	0,0,0	
68	69	73	75	78	80	9	12

TIME	AFTER BACKDOWN
11:52	

NOTES: (INCLUDE SACK RELEASE AND BRAILING OBSERVATIONS)

1 neonate + 1 mottled came up dead during brailing. neonate is a spinner, has an eye to flipper stripe + white belly, dorsal fin is slightly falcate. can't be sure what stock of spinner

PHYSICAL CAUSES OF MORTALITY

DESCRIBE AND DISCUSS MORTALITY:

Both porpoise showed up dead during brailing. Not visible at all prior to that. No net marks on animals. Don't know how or when they died.

PERCENTAGE OF ALL MARINE MAMMALS KILLED:

	% SPOTTED KILLED	% SPINNER KILLED	% ALL OTHER KILLED
ENTANGLEMENT	0,0,0,0 14	0,0,0,0 17	0,0,0,0 20
ENTRAPMENT	0,0,0,0 23	0,0,0,0 26	0,0,0,0 29
SACKED-UP	0,0,0,0 32	0,0,0,0 35	0,0,0,0 38
OTHER	0,0,0,0 41	0,0,0,0 44	0,0,0,0 47
UNKNOWN	1,0,0,0 50	1,0,0,0 53	0,0,0,0 56
OTHER SPECIES/STOCK			

CODE

(Cont. on pg. 8)

NAME

59

1980 MARINE MAMMAL SET LOG

CRUISE # 500 NOAA - U.S. DEPT. OF COMM.
SET # 001 Page 6

OPERATIONAL MALFUNCTIONS

EQUIPMENT MALFUNCTIONS?	MALFUNCTIONS DELAY SET?	MARINE MAMMALS IN NET DURING MALFUNCTION?	SET ABORTED?	NET DUMP?
Y N	Y/N/NA MINUTES	Y/N/NA	Y N TIME	Y N TIME
1	2	2	2	2
61	62 63	66	67 68	72 73 76

DESCRIBE MALFUNCTION(S) IN ORDER OF OCCURRENCE

	OCCURRED	TIME	FIXED	ESTIMATED DELAY IN MINUTES	NOTES: (TYPE OF MALFUNCTION, HOW, WHY)
1	1015	1048	—	—	#3 SPBT. broke down during chase. Another SPBT. dispatched to bring it back during pursuing. Gas tank vent closed.
2					
3					
4					

SKIPPER COMMENTS

Skip. said he'd need to modify stern tiedown point, apron not functioning properly.

1980 MARINE MAMMAL SET LOG

CRUISE # 500 NOAA - U.S. DEPT. OF COMM.

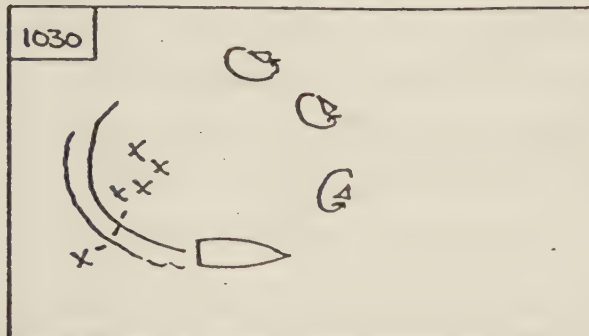
SET # 001

Page 7

SYMBOLS

INDICATE TIME AND EVENT
(Operations, Malfunction, Rescue,
Net Collapse, Mortality, etc.)

TIME



NOTES: Evulsion

30 animals thru stern
wake

X PORPOISE

E ENTANGLEMENT

W WIND DIRECTION

D CURRENT DIRECTION

C CANOPY

N NET COLLAPSE

S CORKLINE SINKAGE

PSP PORPOISE SAFETY PANEL

R PORPOISE RESCUE
OR RELEASE

Ø BOW BUNCH

⑤ SKIFF

▷ SPEEDBOAT

▷ SPEEDBOAT OR
TENDER INVOLVED
IN HAND RELEASE

⑤ SWIMMERS

▷ SPEEDBOAT ATTACHED
BUT NOT TOWING

▷ TOWING FROM STERN

▷ TOWING FROM BOW

▷ TOWING ONE BUNCH

▷ TOWING TWO BUNCHES

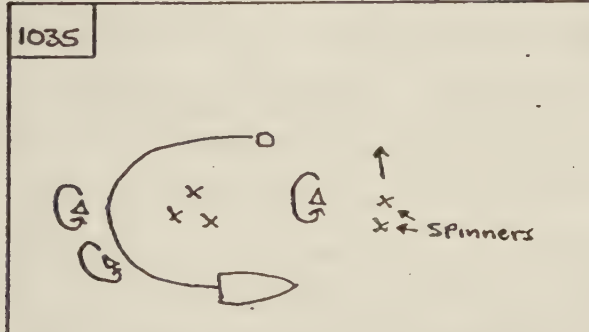
▷ TOWING ON CORKLINE

Ⓡ RAFT

▷ MANNED SPEEDBOAT

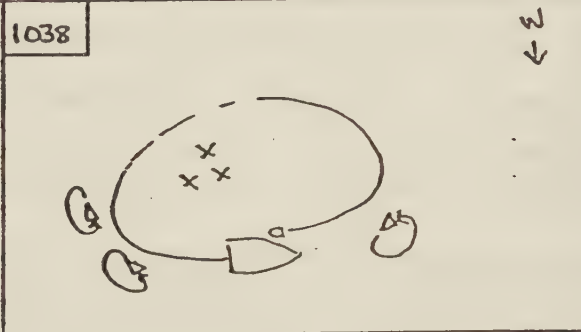
ENTER ADDITIONAL SYMBOLS
YOU USE:

TIME



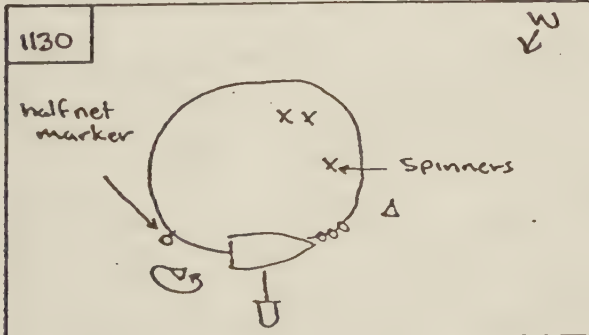
NOTES: Spinners at tail end of
school cut out by circling SPBT.

TIME



NOTES: Encirclement

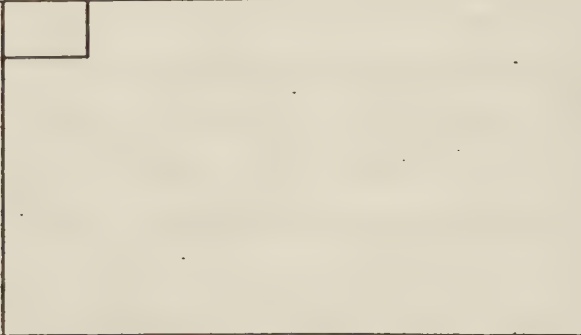
TIME



NOTES: Roll net

SPBT circling at stern

TIME



NOTES:

1980 MARINE MAMMAL SET LOG

NOTES ON THIS SET (NOTE TIMES):

TIMES	
1040	Porpoise escaping under net at $\sim 3/4$ net. ~ 50 spotters
1042	2 spotters jumped over corks
1043	Towline in, #4 SPBT. going out to retrieve stalled SPBT.
1048	stalled SPBT. towed back to vessel, both SPBTs. loaded aboard
	#1 SPBT. tending bow bunches, other SPBT. moving slowly around perimeter of net.
1052	1 st bunch pulled, 2 nd being pulled
1100	2 nd bunch pulled
1103	rings up, pulling 3 rd bunch
1110	net roll - 3 bunches pulled
1115	SPBT. circling at stern
1131	half-net aboard, 2 porpoise rolled up in net
1133	tiedown, #1 SPBT. coming aboard other attaching at BD apex.
1134	#1 SPBT. man in raft with another man
1135	Backdown - had 619 on handcounters
1145	1 W.B. Spinner in net, men chasing it
1152	1 man from raft jumps in and releases it.
1155	SPBT. picked up raft & 2 rescuers, bringing them aboard
1200	SKIFF coming around for sack-up
	1 neonate & 1 mottled came up dead during brailing Neonate is a spinner, has an eye to flipper stripe & whitebelly, dorsal fin is slightly falcate. Can't be sure what stock of spinner.
	Note on skipper comment: I didn't see any net problems during BD, skip. said net should sink more evenly.
	After set - men working on lacing between apron and safety panel

PORPOISE SET LOG / TALLY SUMMARY

CR. NO.	SET NO.
1 1	1 1

CARD	NEONATE			2-TONE			SPECKLED			MOTTLED			ADULT			AGE UNK. SPOT.	
	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		
08																	
	7	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54

EASTERN			WHITEBELLY			UNID. SPIN.		CARD	OTHER SPECIES 1			OTHER SPECIES 2			UNID.	
M	F	?	M	F	?	M	F		?	M	F	?	M	F		?
								09								
57	60	63	66	69	72	75	78	7	9	12	15	18	21	24	27	30

NEONATE			2-TONE			SPECKLED			MOTTLED			ADULT			AGE
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	UNK. SPOT.
33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78

CARD		EASTERN			WHITEBELLY			UNID. SPIN.			OTHER SPECIES 1			OTHER SPECIES 2			UNID.
10		M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	
7	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	

NEONATE			2-TONE			SPECKLED		CARD	MOTTLED			ADULT			AGE	
M	F	?	M	F	?	M	F		?	M	F	?	M	F	?	UNK.
								11								SPOT.
57	60	63	66	69	72	75	78	7	9	12	15	18	21	24	27	30

EASTERN			WHITEBELLY			UNID. SPIN.			OTHER SPECIES 1			OTHER SPECIES 2			UNID.
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	
33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78

CARD	NEONATE			2-TONE			SPECKLED			MOTTLED			ADULT			AGE UNK. SPOT.	
	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		
12																	
	7	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54

EASTERN			WHITEBELLY			UNID. SPIN.		CARD	OTHER SPECIES 1			OTHER SPECIES 2			UNID.	
M	F	?	M	F	?	M	F		?	M	F	?	M	F		?
57	60	63	66	69	72	75	78	7	9	12	15	18	21	24	27	30

NEONATE			2-TONE			SPECKLED			MOTTLED			ADULT			AGE
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	UNK.
33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78

CARD	EASTERN			WHITEBELLY			UNID. SPIN.			OTHER SPECIES 1			OTHER SPECIES 2			UNID.
	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	
14																
7	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54

Other Sp.
1 Code

Other Sp.
2 Code

Spotted
Code

Other
Spinner
Code

57 59 61 63

Recorded by _____

1979-1980 Non-Porpoise Set Log Data (1979 format): BLANK, RANGE,
and LOGICAL error criteria

1979-80
Non-Porpoise Set Log (records 1-2)
Blankness and Range Specifications

Data Element	Columns	Character type	Blankness OK?	Range Lower Upper	
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 01	7- 8	Numeric	No	1	1
DATE	9-14	Numeric	No		
YEAR	9-10	Numeric	No	79	80
MONTH	11-12	Numeric	No	1	12
DAY	13-14	Numeric	No	1	31
POSITION	15-25	Numeric	No		
LATITUDE	15-18	Numeric	No		
LATD	15-16	Numeric	No	0	23
LATM	17-18	Numeric	No	0	59
N-OR-S	19-19	Numeric	No	1	2
LONGITUDE	20-24	Numeric	No		
LONGD	20-22	Numeric	No	85	139
LONGM	23-24	Numeric	No	0	59
E-OR-W	25-25	Numeric	No	2	2
SET-TYPE	26-27	Numeric	No	1	6
BIRDS PRESENT ?	28-28	Numeric	No	1	2
TIME-BIRDS-SIGHTED	29-32	Numeric	Yes		
HR-SIGHTED	29-30	Numeric	Yes	5	18
MIN-SIGHTED	31-32	Numeric	Yes	0	59
DISTANCE-SIGHTED	33-35	Numeric	Yes	0.1	10.0
TOTAL-NUM-BIRDS	36-39	Numeric	Yes	1	5000
WIND	40-41	Numeric	No	0	30
WIND-BEARING	42-44	Numeric	Yes	0	359
SWELL	45-46	Numeric	No	0	10
TIME-NET-LET-GO	47-50	Numeric	No		
HR-NET-LET-GO	47-48	Numeric	No	5	18
MIN-NET-LET-GO	49-50	Numeric	No	0	59
TIME-RINGS-UP	51-54	Numeric	No		
HR-RINGS-UP	51-52	Numeric	No	5	19
MIN-RINGS-UP	53-54	Numeric	No	0	59
NUM-BUNCHES	55-55	Numeric	No	0	5
SACKUP	56-56	Numeric	Yes	1	2
TIME-START-SACK	57-60	Numeric	Yes		
HR-START-SACK	57-58	Numeric	Yes	6	19
MIN-START-SACK	59-60	Numeric	Yes	0	59

1979-80
Non-Porpoise Set Log (records 1-2)
Blankness and Range Specifications

Data Element	Columns	Character type	Blankness OK?	Range	
				Lower	Upper
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 02	7- 8	Numeric	No	2	2
BRAILING	09-09	Numeric	No	1	2
TIME-START-BRAIL	10-13	Numeric	Yes		
HR-START-BRAIL	10-11	Numeric	Yes	6	19
MIN-START-BRAIL	12-13	Numeric	Yes	0	59
TIME-END-BRAIL	14-17	Numeric	Yes		
HR-END-BRAIL	14-15	Numeric	Yes	6	21
MIN-END-BRAIL	16-17	Numeric	Yes	0	59
TIME-END-SET	18-21	Numeric	No		
HR-END-SET	18-19	Numeric	No	6	21
MIN-END-SET	20-21	Numeric	No	0	59
TONS-YF	22-24	Numeric	No	0	50
TONS-SK	25-27	Numeric	No	0	50
TONS-OTHER-FISH	28-30	Numeric	No	0	10
OTHER-FISH-CODE	31-32	Numeric	Yes	1	8
FISH-LOSS-DUR-BD	33-33	Numeric	No	1	2
GEAR-MODIFIED-?	34-34	Numeric	No	1	2
CURRENT-STRONG-?	35-35	Numeric	No	1	2

SLEDIT79NL

- ERROR001 THE PRESENT OCCURANCE OF SET (1.04) MUST BE EQUAL TO THE PREVIOUS OCCURANCE OF SET +1.
- ERROR002 IF THE PRESENT OCCURANCE OF MONTH (1.11) IS EQL TO THE PREVIOUS OCCURANCE OF MONTH - THE PRESENT OCCURANCE OF DAY (1.13) MUST BE EQUAL TO OR GTR THAN THE PREVIOUS OCCURRENCE OF DAY.
- ERROR003 IF THE PRESENT OCCURANCE OF MONTH (1.11) IS NOT EQL TO THE PREVIOUS OCCURANCE OF MONTH ... THE PRESENT OCCURRENCE OF MONTH MUST BE EQUAL TO THE PREVIOUS OCCURRENCE OF MONTH +1.
- ERROR004 IF THE PRESENT OCCURANCE OF N OR S (1.19) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF N OR S ... THIS MAY CONSTITUTE AN ERROR.
- ERROR005 IF THE SET TYPE (1.26) IS EQUAL TO 02,07,08 - THIS SET HAS BEEN RECORDED ON THE WRONG SETLOG FORMAT TYPE.
- ERROR006 IF THE ELEMENT BIRDS CUE (1.28) IS EQUAL TO 1 ... THE ELEMENT BIRDS (1.29) SHOULD BE EQUAL TO 1.
- ERROR007 IF BIRDS (1.28) IS EQUAL TO 2 ... THE ELEMENTS TIME SIGHT BIRDS(1.29), BIRDS DISTANCE(1.33), AND NUM BIRDS (1.36) MUST BE BLANK.
- ERROR008 IF WIND (1.30) IS GREATER THAN 00 ... WIND BEARING (1.32) SHOULD BE NON-BLANK.
- ERROR009 IF WIND (1.30) IS EQUAL TO 00 ... WIND BEARING (1.32) SHOULD BE BLANK.
- ERROR010 IF THE SUM OF THE ELEMENTS TONS YF (2.22), TONS SK (2.25), AND TONS OTHER FISH (2.28) IS GREATER THAN TEN ... NUM BUNCHES (1.45) SHOULD BE GREATER THAN ZERO.
- ERROR011 IF SACKUP (1.46) IS EQUAL TO 1 ... TIME START SACK (1.47) SHOULD BE NON-BLANK.
- ERROR012 IF SACKUP (1.46) IS EQUAL TO 2 ... TIME START SACK (1.47) SHOULD BE BLANK.
- ERROR013 IF BRAILING (2.09) IS EQUAL TO 1...SACKUP (1.46) MUST BE EQUAL TO 1.
- ERROR014 IF SACKUP (1.46) IS EQUAL TO 2 ... BRAILING(2.09) MUST BE EQUAL TO 2.
- ERROR015 IF BRAILING (2.09) IS EQUAL TO 1 ... THE ELEMENTS TIME START BRAIL(2.10), AND TIME END BRAIL(2.14) SHOULD BE NON BLANK.
- ERROR016 IF BRAILING (2.09) IS EQUAL TO 2 ... THE ELEMENTS TIME START BRAIL(2.10), AND TIME END BRAIL(2.14) SHOULD BE BLANK.
- ERROR017 IF TONS OTHER FISH (2.28) IS GREATER THAN ZERO - OTHER FISH CODE (2.31) MUST BE NON BLANK.
- ERROR018 IF TONS OTHER FISH (2.28) IS EQUAL TO ZERO ... OTHER FISH CODE (2.31) MUST BE BLANK.
- ERROR019 THE PRESENT OCCURRENCE OF SET(1.04) MUST BE EQL TO THE PREVIOUS OCCURANCE OF SET +1.
- ERROR020 IF THE PRESENT OCCURRENCE OF MONTH(1.11) IS EQL TO THE PREVIOUS OCCURANCE OF MONTH - THE PRESENT OCCURANCE OF DAY (1.13) MUST BE EQUAL TO OR GTR THAN THE PREVIOUS OCCURRENCE OF DAY
- ERROR021 IF THE PRESENT OCCURRENCE OF MONTH(1.11) IS NOT EQL TO THE PREVIOUS OCCURRENCE OF MONTH ... THE PRESENT

OCCURRENCE OF MONTH MUST BE EQUAL TO THE PREVIOUS
OCCURRENCE OF MONTH +1.

ERROR022 IF THE PRESENT OCCURANCE OF DAY(1.13) IS LESS THAN THE
PREVIOUS OCCURANCE OF DAY ... THE PRESENT OCCURANCE OF
MONTH (1.11) SHOULD BE GREATER THAN THE PREVIOUS
OCCURRENCE OF MONTH.

ERROR023 IF THE PRESENT OCCURANCE OF N OR S (1.19) IS NOT EQUAL
TO THE PREVIOUS OCCURANCE OF N OR S ... THIS MAY
CONSTITUTE AN ERROR.

ERROR149 IF TIME START BRAIL (2.10) IS NON-BLANK ... TIME START
BRAIL SHOULD BE GREATER THAN TIME START SACK (1.47).

ERROR150 IF TIME END BRAIL (2.14) IS NON-BLANK...TIME END BRAIL
SHOULD BE GREATER THAN TIME START BRAIL (2.10).

ERROR151 IF BRAILING (2.09) IS EQUAL TO 1 ... THE SUM OF THE
ELEMENTS TONS YF(2.22), TONS SK(2.25), AND TONS OTHER
(2.28) SHOULD BE GREATER THAN ZERO.

ERROR152 IF TIME END SET (2.18) IS NON-BLANK ... TIME END SET
SHOULD BE GREATER THAN ALL OTHER TIME-ELEMENTS
RECORDED IN THIS SET.

ERROR189 IN THIS NON PORPOISE SET, IF TIME NET LET GO (1.47) IS
NON BLANK - THE CONCATENATED DATE/TIME NET LET GO MUST
BE GREATER THAN THE LAST CONCATENATED DATE/(NON BLANK)
TIME OF THE PREVIOUS SET.

1979-1980 Porpoise Set Log and Tally Data: BLANK, RANGE, and
LOGICAL error criteria

1979-80
 Porpoise Set Log (records 1-7) and
 Porpoise Tally (records 8-14)
 Blankness and Range Specifications

Data Element	Columns	Character type	Blankness OK?	Range Lower Upper	
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 01	7- 8	Numeric	No	1	1
DATE	9-14	Numeric	No		
YEAR	9-10	Numeric	No	79	80
MONTH	11-12	Numeric	No	1	12
DAY	13-14	Numeric	No	1	31
POSITION	15-25	Numeric	No		
LATITUDE	15-18	Numeric	No		
LATD	15-16	Numeric	No	0	23
LATM	17-18	Numeric	No	0	59
N-OR-S	19-19	Numeric	No	1	2
LONGITUDE	20-24	Numeric	No		
LONGD	20-22	Numeric	No	85	139
LONGM	23-24	Numeric	No	0	59
E-OR-W	25-25	Numeric	No	2	2
SET-TYPE	26-27	Numeric	No	2	8
TIME-CHASE-BEGAN	28-31	Numeric	No		
HR-CHASE	28-29	Numeric	No	5	18
MIN-CHASE	30-31	Numeric	No	0	59
NUM-BOATS-USED	32-32	Numeric	No	3	6
E1-PORP-TOT	33-36	Numeric	No	20	8000
E1-SPT	37-39	Numeric	Yes	0	100
E1-SPN	40-42	Numeric	Yes	0	100
E1-OTHER-SP1	43-45	Numeric	Yes	0	100
E1-OTHER-SP2	46-48	Numeric	Yes	0	50
SPC-OTHER-SP1	49-50	Numeric	Yes	5	79
E2-PORP-TOT	51-54	Numeric	Yes	20	8000
E2-SPT	55-57	Numeric	Yes	0	100
E2-SPN	58-60	Numeric	Yes	0	100
E2-OTHER-SP1	61-63	Numeric	Yes	0	100
E2-OTHER-SP2	64-66	Numeric	Yes	0	100
SPC-OTHER-SP2	67-68	Numeric	Yes	5	79
BLANKS	69-80				
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 02	7- 8	Numeric	No	2	2
E3-PORP-TOT	9-12	Numeric	Yes	20	8000
E3-SPT	13-15	Numeric	Yes	0	100
E3-SPN	16-18	Numeric	Yes	0	100
E3-OTHER-SP1	19-21	Numeric	Yes	0	100
E3-OTHER-SP2	22-24	Numeric	Yes	0	100

OBS-BST-EST-BEF	25-28	Numeric	No	1	8000
OBS-HI-EST-BEF	29-32	Numeric	No	1	9999
OBS-LO-EST-BEF	33-36	Numeric	No	1	5000
OBS-SPT-BEF	37-39	Numeric	No	0	100
OBS-EASTERN-BEF	40-42	Numeric	No	0	100
OBS-WB-BEF	43-45	Numeric	No	0	100
OBS-SPN2-BEF	46-48	Numeric	No	0	100
OBS-OTHR1-BEF	49-51	Numeric	No	0	100
OBS-OTHR2-BEF	52-54	Numeric	No	0	50
OBS-SPT-CD-BEF	55-56	Numeric	Yes	2	90
OBS-SPN2-CD-BEF	57-58	Numeric	Yes	3	11
OBS-OTHR1-CD-BEF	59-60	Numeric	Yes	5	79
OBS-OTHR2-CD-BEF	61-62	Numeric	Yes	5	79
TIME-NET-LET-GO	63-66	Numeric	No		
HR-NET-LET-GO	63-64	Numeric	No	5	18
MIN-NET-LET-GO	65-66	Numeric	No	0	59
EVADED-SET	67-67	Numeric	No	1	2
TOT-EVADED-SET	68-71	Numeric	Yes	1	5000
SPC-EVADED-SET	72-73	Numeric	Yes	2	79
BLANKS	74-80				
Cruise Number (1979)	1- 3	Numeric	No	450	590
	(1980) 1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 03	7- 8	Numeric	No	3	3
OBS-BST-EST-ENC	09-12	Numeric	No	1	5000
OBS-HI-EST-ENC	13-16	Numeric	No	1	8000
OBS-LO-EST-ENC	17-20	Numeric	No	1	3000
OBS-SPT-ENC	21-23	Numeric	No	0	100
OBS-EASTERN-ENC	24-26	Numeric	No	0	100
OBS-WB-ENC	27-29	Numeric	No	0	100
OBS-SPN2-ENC	30-32	Numeric	No	0	100
OBS-OTHR1-ENC	33-35	Numeric	No	0	100
OBS-OTHR2-ENC	36-38	Numeric	No	0	50
OBS-SPT-CD-ENC	39-40	Numeric	Yes	2	90
OBS-SPN2-CD-ENC	41-42	Numeric	Yes	3	11
OBS-OTHR1-CD-ENC	43-44	Numeric	Yes	5	79
OBS-OTHR2-CD-ENC	45-46	Numeric	Yes	5	79
WIND-TOWLINE-IN	47-48	Numeric	Yes	0	30
WIND-BEARING	49-51	Numeric	Yes	0	359
SWELL-TOWLINE-IN	52-53	Numeric	Yes	0	10
TIME-RINGS-UP	54-57	Numeric	No		
HR-RINGS-UP	54-55	Numeric	No	6	19
MIN-RINGS-UP	56-57	Numeric	No	0	59
ESCAP-BEF-RNG-UP	58-58	Numeric	Yes	1	2
NUM-ESCAP-BEF	59-62	Numeric	Yes	1	5000
SPC-ESCAP-BEF	63-64	Numeric	Yes	2	79
E1-TOT-CATCH	65-68	Numeric	No	1	8000
E1-SPT-CATCH	69-71	Numeric	Yes	0	100
E1-SPN-CATCH	72-74	Numeric	Yes	0	100
E1-OTHER1-CATCH	75-77	Numeric	Yes	0	100
E1-OTHER2-CATCH	78-80	Numeric	Yes	0	50
Cruise Number (1979)	1- 3	Numeric	No	450	590
	(1980) 1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 04	7- 8	Numeric	No	4	4

OTHER1CODE-CATCH	09-10	Numeric	Yes	5	79
E2-TOT-CATCH	11-14	Numeric	Yes	1	8000
E2-SPT-CATCH	15-17	Numeric	Yes	0	100
E2-SPN-CATCH	18-20	Numeric	Yes	0	100
E2-OTHER1-CATCH	21-23	Numeric	Yes	0	100
E2-OTHER2-CATCH	24-26	Numeric	Yes	0	50
OTHER2CODE-CATCH	27-28	Numeric	Yes	5	79
E3-TOT-CATCH	29-32	Numeric	Yes	1	8000
E3-SPT-CATCH	33-35	Numeric	Yes	0	100
E3-SPN-CATCH	36-38	Numeric	Yes	0	100
E3-OTHER1-CATCH	39-41	Numeric	Yes	0	100
E3-OTHER2-CATCH	42-44	Numeric	Yes	0	50
OBS-BST-EST-CAP	45-48	Numeric	No	1	5000
OBS-HI-EST-CAP	49-52	Numeric	No	1	8000
OBS-LO-EST-CAP	53-56	Numeric	No	1	3000
OBS-SPT-CAP	57-59	Numeric	No	0	100
OBS-EASTERN-CAP	60-62	Numeric	No	0	100
OBS-WB-CAP	63-65	Numeric	No	0	100
OBS-SPN2-CAP	66-68	Numeric	No	0	100
OBS-OTHR1-CAP	69-71	Numeric	No	0	100
OBS-OTHR2-CAP	72-74	Numeric	No	0	50
OBS-SPT-CD-CAP	75-76	Numeric	Yes	2	90
OBS-SPN2-CD-CAP	77-78	Numeric	Yes	3	11
OBS-OTHR1-CD-CAP	79-80	Numeric	Yes	5	79
Cruise Number (1979)	1- 3	Numeric	Yes	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 05	7- 8	Numeric	No	5	5
OBS-OTHR2-CD-CAP	09-10	Numeric	Yes	5	79
NUM-BD-SPEEDBOAT	11-11	Numeric	No	2	3
BOAT-TOW-BEF-BD	12-12	Numeric	No	1	3
COLLAPSE-BEF-BD	13-13	Numeric	No	1	3
COLLAPSE-KIL-BEF	14-14	Numeric	No	1	3
BOAT-INFLU-PORP	15-15	Numeric	No	1	3
BOAT-ADJ-BD-AREA	16-16	Numeric	No	1	3
RESCU-EFF-BEF-BD	17-17	Numeric	No	1	2
NUM-RESCUERS-BEF	18-19	Numeric	Yes	1	4
RELS-RAFT-BEF-BD	20-20	Numeric	Yes	1	2
RELS-BOAT-BEF-BD	21-21	Numeric	Yes	1	2
RELS-SWMR-BEF-BD	22-22	Numeric	Yes	1	2
RELS-OTHR-BEF-BD	23-23	Numeric	Yes	1	2
LIVE-REL-BEF-BD	24-26	Numeric	Yes	0	20
ESCAP-AFT-RNG-UP	27-27	Numeric	No	1	2
NUM-ESCAP-AFT	28-30	Numeric	Yes	1	50
BACKDOWN	31-31	Numeric	No	1	2
TIME-START-BD	32-35	Numeric	Yes		
HR-START-BD	32-33	Numeric	Yes	6	19
MIN-START-BD	34-35	Numeric	Yes	0	59
NUM-BUNCHES	36-36	Numeric	Yes	3	3
SUNDOWN	37-37	Numeric	Yes	1	2
LIGHTS-DUR-BD	38-38	Numeric	Yes	1	2
PNL-COVR-BD-AREA	39-39	Numeric	Yes	1	2
NET-TIED-DOWN	40-40	Numeric	Yes	1	3
TIME-END-BD	41-44	Numeric	Yes		
HR-END-BD	41-42	Numeric	Yes	6	19

MIN-END-BD	43-44	Numeric	Yes	0	59
BST-EST-RELS-DUR	45-48	Numeric	Yes	10	5000
HI-EST-RELS-DUR	49-52	Numeric	Yes	10	8000
LO-EST-RELS-DUR	53-56	Numeric	Yes	10	3000
FISH-LOSS-DUR-BD	57-57	Numeric	Yes	1	2
NUM-LOSS-DUR-BD	58-60	Numeric	Yes	1	30
CANOPIES-PRESENT	61-61	Numeric	Yes	1	2
CANOPY-BD-KILL	62-62	Numeric	Yes	1	3
RESCU-EFF-DUR-BD	63-63	Numeric	Yes	1	2
NUM-RESCUERS-DUR	64-65	Numeric	Yes	2	5
RELS-BOAT-DUR-BD	66-66	Numeric	Yes	1	2
RELS-RAFT-DUR-BD	67-67	Numeric	Yes	1	2
FACEMASK-EFF-DUR	68-68	Numeric	Yes	1	2
RELS-SWMR-DUR-BD	69-69	Numeric	Yes	1	2
RELS-OTHR-DUR-BD	70-70	Numeric	Yes	1	2
LIVE-REL-DUR-BD	71-73	Numeric	Yes	0	100
TOT-LIVE-AFT-BD	74-76	Numeric	Yes	0	30
BLANKS	77-80				
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 06	7- 8	Numeric	No	6	6
RELS-RAFT-AFT-BD	09-09	Numeric	No	1	2
NUM-MEN-RAFT-AFT	10-10	Numeric	Yes	1	2
NUM-REL-RAFT-AFT	11-13	Numeric	Yes	0	20
RELS-BOAT-AFT-BD	14-14	Numeric	No	1	2
NUM-MEN-BOAT-AFT	15-15	Numeric	Yes	1	4
NUM-REL-BOAT-AFT	16-18	Numeric	Yes	0	20
RELS-SWMR-AFT-BD	19-19	Numeric	No	1	2
NUM-SWMR-AFT-BD	20-20	Numeric	Yes	1	4
NUM-REL-SWMR-AFT	21-23	Numeric	Yes	0	20
RELS-OTHR-AFT-BD	24-24	Numeric	No	1	2
NUM-MEN-OTHR-AFT	25-25	Numeric	Yes	1	4
NUM-REL-OTHR-AFT	26-28	Numeric	Yes	0	99
NUM-RESCUERS-AFT	29-30	Numeric	No	0	6
RELS-DECK-AFT-BD	31-31	Numeric	No	1	2
NUM-REL-DECK-AFT	32-34	Numeric	Yes	1	20
ESCAP-AFT-BD	35-35	Numeric	No	1	2
NUM-ESCAP-AFT-BD	36-38	Numeric	Yes	1	99
SACKUP	39-39	Numeric	Yes	1	2
TIME-START-SACK	40-43	Numeric	Yes		
HR-START-SACK	40-41	Numeric	Yes	7	20
MIN-START-SACK	42-43	Numeric	Yes	0	59
NUM-LIV-SRT-SACK	44-46	Numeric	Yes	0	10
RELS-SACK-AFT-BD	47-47	Numeric	Yes	1	2
NUM-MEN-SACK-AFT	48-48	Numeric	Yes	1	4
NUM-REL-SACK-AFT	49-51	Numeric	Yes	0	10
BRAILING	52-52	Numeric	No	1	2
TIME-START-BRAIL	53-56	Numeric	Yes		
HR-START-BRAIL	53-54	Numeric	Yes	7	20
MIN-START-BRAIL	55-56	Numeric	Yes	0	59
NUM-LIV-BEF-BRAL	57-59	Numeric	Yes	0	5
TIME-END-BRAIL	60-63	Numeric	Yes		
HR-END-BRAIL	60-61	Numeric	Yes	7	22
MIN-END-BRAIL	62-63	Numeric	Yes	0	59

TIME-END-SET	64-67	Numeric	No		
HR-END-SET	64-65	Numeric	No	7	22
MIN-END-SET	66-67	Numeric	No	0	59
CURRENT-STRONG	68-68	Numeric	No	1	2
KNOWN-KILLED	69-72	Numeric	No	0	100
KNOWN-INJURED	73-74	Numeric	No	0	19
TONS-YF	75-77	Numeric	No	0	100
TONS-SK	78-80	Numeric	No	0	30
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 07	7- 8	Numeric	No	7	7
TONS-OTHER-FISH	09-11	Numeric	No	0	10
OTHER-FISH-CODE	12-13	Numeric	Yes	1	8
TANGL-SPT-KILL	14-16	Numeric	Yes	570	700
TANGL-SPN-KILL	17-19	Numeric	Yes	1	125
TANGL-OTH-KILL	20-22	Numeric	Yes	3	3
TRAP-SPT-KILL	23-25	Numeric	Yes	0	100
TRAP-SPN-KILL	26-28	Numeric	Yes	0	100
TRAP-OTH-KILL	29-31	Numeric	Yes	0	100
SACKUP-SPT-KILL	32-34	Numeric	Yes	0	100
SACKUP-SPN-KILL	35-37	Numeric	Yes	0	100
SACKUP-OTH-KILL	38-40	Numeric	Yes	0	100
OTHER-SPT-KILL	41-43	Numeric	Yes	0	100
OTHER-SPN-KILL	44-46	Numeric	Yes	0	100
OTHER-OTH-KILL	47-49	Numeric	Yes	0	100
UNK-SPT-KILL	50-52	Numeric	Yes	0	100
UNK-SPN-KILL	53-55	Numeric	Yes	0	100
UNK-OTH-KILL	56-58	Numeric	Yes	0	100
OTHER-SPC-KILL	59-60	Numeric	Yes	5	77
EQUIP-MALF	61-61	Numeric	No	1	2
MALF-DELAY-SET	62-62	Numeric	No	1	3
MALF-DELAY-MIN	63-65	Numeric	Yes	1	120
PORP-IN-NET	66-66	Numeric	No	1	3
SET-ABORTED	67-67	Numeric	No	1	2
TIME-SET-ABORT	68-71	Numeric	Yes		
HR-SET-ABORT	68-69	Numeric	Yes	6	21
MIN-SET-ABORT	70-71	Numeric	Yes	0	59
NET-DUMPED	72-72	Numeric	No	1	2
TIME-NET-DUMPED	73-76	Numeric	Yes		
HR-NET-DUMPED	73-74	Numeric	Yes	7	22
MIN-NET-DUMPED	75-76	Numeric	Yes	0	59
BLANKS	77-80				
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 08	7- 8	Numeric	No	8	8
Dead Neo M	9-11	Numeric	Yes	1	15
Dead Neo F	12-14	Numeric	Yes	1	15
Dead Neo Q	15-17	Numeric	Yes	1	15
Dead 2Tone M	18-20	Numeric	Yes	1	15
Dead 2Tone F	21-23	Numeric	Yes	1	15
Dead 2Tone Q	24-26	Numeric	Yes	1	15
Dead Speckl M	27-29	Numeric	Yes	1	15
Dead Speckl F	30-32	Numeric	Yes	1	15

Dead Speckl Q	33-35	Numeric	Yes	1	15
Dead Motl M	36-38	Numeric	Yes	1	15
Dead Motl F	38-41	Numeric	Yes	1	15
Dead Motl Q	42-44	Numeric	Yes	1	15
Dead Adult M	45-47	Numeric	Yes	1	15
Dead Adult F	48-50	Numeric	Yes	1	15
Dead Adult Q	51-53	Numeric	Yes	1	15
Dead Age Unk	54-56	Numeric	Yes	1	15
Dead Eastern M	57-59	Numeric	Yes	1	15
Dead Eastern F	60-62	Numeric	Yes	1	15
Dead Eastern Q	63-65	Numeric	Yes	1	15
Dead WB M	66-68	Numeric	Yes	1	15
Dead WB F	69-71	Numeric	Yes	1	15
Dead WB Q	72-74	Numeric	Yes	1	15
Dead Unid Spn M	75-77	Numeric	Yes	1	15
Dead Unid Spn F	78-80	Numeric	Yes	1	15
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 09	7- 8	Numeric	No	9	9
Dead Unid Spn Q	9-11	Numeric	Yes	1	15
Dead Other Spp 1 M	12-14	Numeric	Yes	1	15
Dead Other Spp 1 F	15-17	Numeric	Yes	1	15
Dead Other Spp 1 Q	18-20	Numeric	Yes	1	15
Dead Other Spp 2 M	21-23	Numeric	Yes	1	15
Dead Other Spp 2 F	24-26	Numeric	Yes	1	15
Dead Other Spp 2 Q	27-29	Numeric	Yes	1	15
Dead Unidentified	30-32	Numeric	Yes	1	15
Alive Neo M	33-35	Numeric	Yes	1	15
Alive Neo F	36-38	Numeric	Yes	1	15
Alive Neo Q	38-41	Numeric	Yes	1	15
Alive 2Tone M	42-44	Numeric	Yes	1	15
Alive 2Tone F	45-47	Numeric	Yes	1	15
Alive 2Tone Q	48-50	Numeric	Yes	1	15
Alive Speckl M	51-53	Numeric	Yes	1	15
Alive Speckl F	54-56	Numeric	Yes	1	15
Alive Speckl Q	57-59	Numeric	Yes	1	15
Alive Motl M	60-62	Numeric	Yes	1	15
Alive Motl F	63-65	Numeric	Yes	1	15
Alive Motl Q	66-68	Numeric	Yes	1	15
Alive Adult M	69-71	Numeric	Yes	1	15
Alive Adult F	72-74	Numeric	Yes	1	15
Alive Adult Q	75-77	Numeric	Yes	1	15
Alive Age Unk	78-80	Numeric	Yes	1	15
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 10	7- 8	Numeric	No	10	10
Alive Eastern M	9-11	Numeric	Yes	1	15
Alive Eastern F	12-14	Numeric	Yes	1	15
Alive Eastern Q	15-17	Numeric	Yes	1	15
Alive WB M	18-20	Numeric	Yes	1	15
Alive WB F	21-23	Numeric	Yes	1	15
Alive WB Q	24-26	Numeric	Yes	1	15
Alive Unid Spn M	27-29	Numeric	Yes	1	15

Alive Unid Spn F	30-32	Numeric	Yes	1	15
Alive Unid Spn Q	33-35	Numeric	Yes	1	15
Alive Other Spp 1 M	36-38	Numeric	Yes	1	15
Alive Other Spp 1 F	38-41	Numeric	Yes	1	15
Alive Other Spp 1 Q	42-44	Numeric	Yes	1	15
Alive Other Spp 2 M	45-47	Numeric	Yes	1	15
Alive Other Spp 2 F	48-50	Numeric	Yes	1	15
Alive Other Spp 2 Q	51-53	Numeric	Yes	1	15
Alive Unidentified	54-56	Numeric	Yes	1	15
Inj Neo M	57-59	Numeric	Yes	1	5
Inj Neo F	60-62	Numeric	Yes	1	5
Inj Neo Q	63-65	Numeric	Yes	1	5
Inj 2Tone M	66-68	Numeric	Yes	1	5
Inj 2Tone F	69-71	Numeric	Yes	1	5
Inj 2Tone Q	72-74	Numeric	Yes	1	5
Inj Speckl M	75-77	Numeric	Yes	1	5
Inj Speckl F	78-80	Numeric	Yes	1	5
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 11	7- 8	Numeric	No	11	11
Inj Speckl Q	9-11	Numeric	Yes	1	5
Inj Motl M	12-14	Numeric	Yes	1	5
Inj Motl F	15-17	Numeric	Yes	1	5
Inj Motl Q	18-20	Numeric	Yes	1	5
Inj Adult M	21-23	Numeric	Yes	1	5
Inj Adult F	24-26	Numeric	Yes	1	5
Inj Adult Q	27-29	Numeric	Yes	1	5
Inj Age Unk	30-32	Numeric	Yes	1	5
Inj Eastern M	33-35	Numeric	Yes	1	5
Inj Eastern F	36-38	Numeric	Yes	1	5
Inj Eastern Q	38-41	Numeric	Yes	1	5
Inj WB M	42-44	Numeric	Yes	1	5
Inj WB F	45-47	Numeric	Yes	1	5
Inj WB Q	48-50	Numeric	Yes	1	5
Inj Unid Spn M	51-53	Numeric	Yes	1	5
Inj Unid Spn F	54-56	Numeric	Yes	1	5
Inj Unid Spn Q	57-59	Numeric	Yes	1	5
Inj Other Spp 1 M	60-62	Numeric	Yes	1	5
Inj Other Spp 1 F	63-65	Numeric	Yes	1	5
Inj Other Spp 1 Q	66-68	Numeric	Yes	1	5
Inj Other Spp 2 M	69-71	Numeric	Yes	1	5
Inj Other Spp 2 F	72-74	Numeric	Yes	1	5
Inj Other Spp 2 Q	75-77	Numeric	Yes	1	5
Inj Unidentified	78-80	Numeric	Yes	1	5
Cruise Number (1979)	1- 3	Numeric	No	450	590
(1980)	1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 12	7- 8	Numeric	No	12	12
Q Neo M	9-11	Numeric	Yes	1	10
Q Neo F	12-14	Numeric	Yes	1	10
Q Neo Q	15-17	Numeric	Yes	1	10
Q 2Tone M	18-20	Numeric	Yes	1	10
Q 2Tone F	21-23	Numeric	Yes	1	10
Q 2Tone Q	24-26	Numeric	Yes	1	10

Q Speckl M	27-29	Numeric	Yes	1	10
Q Speckl F	30-32	Numeric	Yes	1	10
Q Speckl Q	33-35	Numeric	Yes	1	10
Q Motl M	36-38	Numeric	Yes	1	10
Q Motl F	38-41	Numeric	Yes	1	10
Q Motl Q	42-44	Numeric	Yes	1	10
Q Adult M	45-47	Numeric	Yes	1	10
Q Adult F	48-50	Numeric	Yes	1	10
Q Adult Q	51-53	Numeric	Yes	1	10
Q Age Unk	54-56	Numeric	Yes	1	10
Q Eastern M	57-59	Numeric	Yes	1	10
Q Eastern F	60-62	Numeric	Yes	1	10
Q Eastern Q	63-65	Numeric	Yes	1	10
Q WB M	66-68	Numeric	Yes	1	10
Q WB F	69-71	Numeric	Yes	1	10
Q WB Q	72-74	Numeric	Yes	1	10
Q Unid Spn M	75-77	Numeric	Yes	1	10
Q Unid Spn F	78-80	Numeric	Yes	1	10
Cruise Number (1979)	1- 3	Numeric	No	450	590
	(1980) 1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 13	7- 8	Numeric	No	13	13
Q Unid Spn Q	9-11	Numeric	Yes	1	10
Q Other Spp 1 M	12-14	Numeric	Yes	1	10
Q Other Spp 1 F	15-17	Numeric	Yes	1	10
Q Other Spp 1 Q	18-20	Numeric	Yes	1	10
Q Other Spp 2 M	21-23	Numeric	Yes	1	10
Q Other Spp 2 F	24-26	Numeric	Yes	1	10
Q Other Spp 2 Q	27-29	Numeric	Yes	1	10
Q Unidentified	30-32	Numeric	Yes	1	10
Q Inj Neo M	33-35	Numeric	Yes	1	10
Q Inj Neo F	36-38	Numeric	Yes	1	10
Q Inj Neo Q	38-41	Numeric	Yes	1	10
Q Inj 2Tone M	42-44	Numeric	Yes	1	10
Q Inj 2Tone F	45-47	Numeric	Yes	1	10
Q Inj 2Tone Q	48-50	Numeric	Yes	1	10
Q Inj Speckl M	51-53	Numeric	Yes	1	10
Q Inj Speckl F	54-56	Numeric	Yes	1	10
Q Inj Speckl Q	57-59	Numeric	Yes	1	10
Q Inj Motl M	60-62	Numeric	Yes	1	10
Q Inj Motl F	63-65	Numeric	Yes	1	10
Q Inj Motl Q	66-68	Numeric	Yes	1	10
Q Inj Adult M	69-71	Numeric	Yes	1	10
Q Inj Adult F	72-74	Numeric	Yes	1	10
Q Inj Adult Q	75-77	Numeric	Yes	1	10
Q Inj Age Unk	78-80	Numeric	Yes	1	10
Cruise Number (1979)	1- 3	Numeric	No	450	590
	(1980) 1- 3	Numeric	No	570	700
Set Number	4- 6	Numeric	No	1	125
Record Number 14	7- 8	Numeric	No	14	14
Q Inj Eastern M	9-11	Numeric	Yes	1	10
Q Inj Eastern F	12-14	Numeric	Yes	1	10
Q Inj Eastern Q	15-17	Numeric	Yes	1	10
Q Inj WB M	18-20	Numeric	Yes	1	10
Q Inj WB F	21-23	Numeric	Yes	1	10

Q Inj WB Q	24-26	Numeric	Yes	1	10
Q Inj Unid Spn M	27-29	Numeric	Yes	1	10
Q Inj Unid Spn F	30-32	Numeric	Yes	1	10
Q Inj Unid Spn Q	33-35	Numeric	Yes	1	10
Q Inj Other Spp 1 M	36-38	Numeric	Yes	1	10
Q Inj Other Spp 1 F	38-41	Numeric	Yes	1	10
Q Inj Other Spp 1 Q	42-44	Numeric	Yes	1	10
Q Inj Other Spp 2 M	45-47	Numeric	Yes	1	10
Q Inj Other Spp 2 F	48-50	Numeric	Yes	1	10
Q Inj Other Spp 2 Q	51-53	Numeric	Yes	1	10
Q Inj Unidentified	54-56	Numeric	Yes	1	10
Other Spp 1 Code	57-58	Numeric	Yes	5	79
Other Spp 2 Code	59-60	Numeric	Yes	5	79
Other Spot Code	61-62	Numeric	Yes	2	90
Other Spn Code	63-64	Numeric	Yes	3	3

SLEDIT79PL

- ERROR001 THE PRESENT OCCURANCE OF SET (1.04) MUST BE EQUAL TO THE PREVIOUS OCCURANCE OF SET +1.
- ERROR002 IF THE PRESENT OCCURANCE OF MONTH (1.11) IS EQL TO THE PREVIOUS OCCURANCE OF MONTH - THE PRESENT OCCURANCE OF DAY (1.13) MUST BE EQUAL TO OR GTR THAN THE PREVIOUS OCCURRENCE OF DAY.
- ERROR003 IF THE PRESENT OCCURANCE OF MONTH (1.11) IS NOT EQL TO THE PREVIOUS OCCURANCE OF MONTH ... THE PRESENT OCCURRENCE OF MONTH MUST BE EQUAL TO THE PREVIOUS OCCURRENCE OF MONTH +1.
- ERROR004 IF THE PRESENT OCCURANCE OF N OR S (1.19) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF N OR S ... THIS MAY CONSTITUTE AN ERROR.
- ERROR008 IF WIND (1.40) IS GREATER THAN 00 ... WIND BEARING (1.42) SHOULD BE NON BLANK.
- ERROR014 IF SACKUP (1.56) IS EQUAL TO 2 ... BRAILING(2.09) MUST BE EQUAL TO 2.
- ERROR019 THE PRESENT OCCURRENCE OF SET(1.04) MUST BE EQL TO THE PREVIOUS OCCURANCE OF SET +1.
- ERROR020 IF THE PRESENT OCCURRENCE OF MONTH(1.11) IS EQL TO THE PREVIOUS OCCURANCE OF MONTH - THE PRESENT OCCURANCE OF DAY (1.13) MUST BE EQUAL TO OR GTR THAN THE PREVIOUS OCCURRENCE OF DAY
- ERROR021 IF THE PRESENT OCCURRENCE OF MONTH(1.11) IS NOT EQL TO THE PREVIOUS OCCURRENCE OF MONTH ... THE PRESENT OCCURRENCE OF MONTH MUST BE EQUAL TO THE PREVIOUS OCCURRENCE OF MONTH +1.
- ERROR022 IF THE PRESENT OCCURANCE OF DAY(1.13) IS LESS THAN THE PREVIOUS OCCURANCE OF DAY ... THE PRESENT OCCURANCE OF MONTH (1.11) SHOULD BE GREATER THAN THE PREVIOUS OCCURRENCE OF MONTH.
- ERROR023 IF THE PRESENT OCCURANCE OF N OR S (1.19) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF N OR S ... THIS MAY CONSTITUTE AN ERROR.
- ERROR024 IF THE SET TYPE (1.26) IS NOT EQUAL TO 02, 07, OR 08 - THIS SET HAS BEEN RECORDED ON THE WRONG SETLOG FORMAT TYPE.
- ERROR025 IF NUM BOATS USED (1.32) IS GREATER THAN ZERO ... THE SET TYPE SHOULD BE EQUAL TO 02.
- ERROR026 IF E1 PORP TOT (1.33) IS GREATER THAN ZERO ... THE ELEMENTS E1 SPT (1.37), E1 SPN (1.40), E1 OTHER SP1 (1.43), AND E1 OTHER SP2 (1.46) SHOULD BE NON BLANK.
- ERROR027 IF ONE OF THE ELEMENTS E1 SPT(1.37), E1 SPN(1.40), E1 OTHER SP1 (1.43), OR E1 OTHER SP2 (1.46) IS NON BLANK ... EACH OF THE ELEMENTS E1 SPT, E1 SPN, E1 OTHER SP1, AND E1 OTHER SP2 SHOULD BE NON BLANK.
- ERROR028 IF ONE OF THE ELEMENTS E1 SPT(1.37), E1 SPN(1.40), E1 OTHER SP1 (1.43), OR E1 OTHER SP2 (1.46) IS NON BLANK THE SUM OF THE ELEMENTS E1 SPT, E1 SPN, E1 OTHER SP1, AND E1 OTHER SP2 MUST EQUAL 100.
- ERROR029 IF E2 PORP TOT (1.51) IS GREATER THAN ZERO ... THE ELEMENTS E2 SPT (1.55), E2 SPN (1.58), E2 OTHER SP1 (1.61), AND E2 OTHER SP2 (1.64) SHOULD BE NON BLANK.

ERROR030 IF ONE OF THE ELEMENTS E2 SPT(1.55), E2 SPN(1.58), E2 OTHER SP1 (1.61), OR E2 OTHER SP2 (1.64) IS NON BLANK ... EACH OF THE ELEMENTS E2 SPT, E2 SPN, E2 OTHER SP1, AND E3 OTHER SP2 SHOULD BE NON BLANK.

ERROR031 IF ONE OF THE ELEMENTS E2 SPT(1.55), E2 SPN(1.58), E2 OTHER SP1 (1.61), OR E2 OTHER SP2 (1.64) IS NON BLANK THE SUM OF THE ELEMENTS E2 SPT, E2 SPN, E2 OTHER SP1, AND E2 OTHER SP2 MUST EQUAL 100.

ERROR032 IF E3 PORP TOT (2.09) IS GREATER THAN ZERO ... THE ELEMENTS E3 SPT (2.13), E3 SPN (2.16), E3 OTHER SP1 (2.19), AND E3 OTHER SP2 (2.22) SHOULD BE NON BLANK.

ERROR033 IF ONE OF THE ELEMENTS E3 SPT(2.13), E3 SPN(2.16), E3 OTHER SP1 (2.19), OR E3 OTHER SP2 (2.22) IS NON BLANK ... EACH OF THE ELEMENTS E3 SPT, E3 SPN, E3 OTHER SP1, AND E3 OTHER SP2, SHOULD BE NON BLANK.

ERROR034 IF ONE OF THE ELEMENTS E3 SPT(2.13), E3 SPN(2.16), E3 OTHER SP1 (2.19), OR E3 OTHER SP2 (2.22) IS NON BLANK THE SUM OF THE ELEMENTS E3 SPT, E3 SPN, E3 OTHER SP1, AND E3 OTHER SP2 MUST EQUAL 100.

ERROR035 IF THE SUM OF ELEMENTS E1 OTHER SP1 (1.43), E2 OTHER SP1 (1.61), AND E3 OTHER SP1 (2.19) IS GTR THAN ZERO ... THE SPC OTHER SP1 (1.49) SHOULD BE NON BLANK.

ERROR036 IF THE SPC OTHER SP1 (1.49) IS NON BLANK - THE SUM OF THE ELEMENTS E1 OTHER SP1 (1.43), E2 OTHER SP1 (1.61), AND E3 OTHER SP1 (2.19) SHOULD BE GREATER THAN ZERO.

ERROR037 IF THE SUM OF ELEMENTS E1 OTHER SP2 (1.46), E2 OTHER SP2 (1.64), AND E3 OTHER SP2 (2.22) IS GTR THAN ZERO ... THE SPC OTHER SP2 (1.67) SHOULD BE NON BLANK.

ERROR038 IF THE SPC OTHER SP2 (1.67) IS NON BLANK - THE SUM OF THE ELEMENTS E1 OTHER SP2 (1.46), E2 OTHER SP2 (1.64), AND E3 OTHER SP2 (2.22) SHOULD BE GREATER THAN ZERO.

ERROR039 IF OBS BST EST BEF (2.25) IS NON BLANK ... THE SUM OF THE ELEMENTS OBS SPT BEF(2.37), OBS EASTERN BEF(2.40), OBS WB BEF (2.43), OBS SPN2 BEF (2.46), OBS OTHR1 BEF (2.49), AND OBS OTHR2 BEF (2.52) MUST EQUAL 100.

ERROR040 IF THE OBS H1 EST BEF (2.29) IS NON BLANK - THE OBS H1 EST BEF SHOULD BE GTR THAN BOTH THE OBS BST EST BEF (2.25) AND THE OBS L0 EST BEF (2.33).

ERROR041 IF THE OBS L0 EST BEF (2.33) IS NON BLANK - THE OBS L0 EST BEF SHOULD BE LESS THAN BOTH THE OBS BST EST BEF (2.25) AND THE OBS H1 EST BEF (2.29).

ERROR042 IF OBS SPT BEF (2.37) IS GREATER THAN ZERO ... OBS SPT CD BEF (2.55) SHOULD BE EQUAL TO 02, 06 OR 90.

ERROR043 IF OBS SPN2 BEF (2.46) IS GREATER THAN ZERO - OBS SPN2 CD BEF (2.57) SHOULD BE EQUAL TO 03.

ERROR044 IF OBS OTHR1 BEF (2.49) IS GREATER THAN ZERO ... OBS OTHR1 CD BEF (2.59) SHOULD BE GREATER THAN 04.

ERROR045 IF OBS OTHR2 BEF (2.52) IS GREATER THAN ZERO ... OBS OTHR2 CD BEF (2.61) SHOULD BE GREATER THAN 04.

ERROR046 IF OBS SPT CD BEF (2.55) IS NON BLANK ... OBS SPT BEF (2.37) SHOULD BE GREATER THAN ZERO.

ERROR047 IF OBS SPN2 CD BEF (2.57) IS NON BLANK - OBS SPN2 BEF (2.46) SHOULD BE GREATER THAN ZERO.

ERROR048 IF OBS OTHR1 CD BEF (2.59) IS NON BLANK ... OBS OTHR1 BEF (2.49) SHOULD BE GREATER THAN ZERO.

ERROR049 IF OBS OTHR2 CD BEF (2.61) IS NON BLANK ... OBS OTHR2
 BEF (2.52) SHOULD BE GREATER THAN ZERO.
 ERROR050 IF EVADED SET (2.67) IS EQUAL TO 2 - THE ELEMENTS TOT
 EVADED SET (2.68), AND SPC EVADED SET (2.72) SHOULD BE
 BLANK.
 ERROR051 IF EVADED SET (2.67) IS EQUAL TO 1 - THE ELEMENTS TOT
 EVADED SET (2.68), AND SPC EVADED SET (2.72) SHOULD BE
 NON BLANK.
 ERROR052 IF OBS BEST EST ENC (3.09) IS NON BLANK ... THE SUM OF
 THE ELEMENTS OBS SPT ENC(3.21), OBS EASTERN ENC(3.24)
 OBS WB ENC (3.27), OBS SPN2 ENC (3.30), OBS OTHR1 ENC
 (3.33), AND OBS OTHR2 ENC (3.36) MUST EQUAL 100.
 ERROR053 IF THE OBS H1 EST ENC (3.13) IS NON BLANK - THE OBS H1
 EST ENC SHOULD BE GTR THAN BOTH THE OBS BST EST ENC
 (3.09) AND THE OBS LO EST ENC (3.17).
 ERROR054 IF THE OBS LO EST ENC (3.17) IS NON BLANK - THE OBS LO
 EST ENC SHOULD BE LESS THAN BOTH THE OBS BST EST ENC
 (3.09) AND THE OBS H1 EST ENC (3.13).
 ERROR055 IF OBS SPT ENC (3.21) IS GREATER THAN ZERO ... OBS SPT
 CD ENC (3.39) SHOULD BE EQUAL TO 02, 06 OR 90.
 ERROR056 IF OBS SPN2 ENC (3.30) IS GREATER THAN ZERO - OBS SPN2
 CD ENC (3.41) SHOULD BE EQUAL TO 03.
 ERROR057 IF OBS OTHR1 ENC (3.33) IS GREATER THAN ZERO ... OBS
 OTHR1 CD ENC (3.43) SHOULD BE NON BLANK.
 ERROR058 IF OBS OTHR2 ENC (3.36) IS GREATER THAN ZERO ... OBS
 OTHR2 CD ENC (3.45) SHOULD BE NON BLANK.
 ERROR059 IF OBS SPT CD ENC (3.39) IS NON BLANK ... OBS SPT ENC
 (3.21) SHOULD BE GREATER THAN ZERO.
 ERROR060 IF OBS SPN2 CD ENC (3.41) IS NON BLANK - OBS SPN2 ENC
 (3.30) SHOULD BE GREATER THAN ZERO.
 ERROR061 IF OBS OTHR1 CD ENC (3.43) IS NON BLANK ... OBS OTHR1
 ENC (3.33) SHOULD BE GREATER THAN ZERO.
 ERROR062 IF OBS OTHR2 CD ENC (3.45) IS NON BLANK ... OBS OTHR2
 ENC (3.36) SHOULD BE GREATER THAN ZERO.
 ERROR063 IF TIME NET LET GO (2.63), AND TIME CHASE BEGAN (1.28)
 ARE NON BLANK - TIME NET LET GO SHOULD BE GREATER THAN
 TIME CHASE BEGAN.
 ERROR064 IF WIND (3.47) IS EQUAL TO ZERO - WIND BEARING (3.49)
 SHOULD BE BLANK.
 ERROR065 IF TIME RINGS UP(3.54), AND TIME NET LET GO(2.63) ARE
 NON BLANK - TIME RINGS UP SHOULD BE GREATER THAN TIME
 NET LET GO.
 ERROR066 IF ESCAPED NET BEF RINGS UP (3.58) IS EQUAL TO 2 - THE
 ELEMENTS TOT ESCAPED NET BEF RINGS UP (3.59), AND SPC
 ESCAPED NET BEF RINGS UP (3.63) SHOULD BE BLANK.
 ERROR067 IF ESCAPED NET BEF RINGS UP (3.58) IS EQUAL TO 1 - THE
 ELEMENTS TOT ESCAPED NET BEF RINGS UP (3.59), AND SPC
 ESCAPED NET BEF RINGS UP (3.63) SHOULD BE NON BLANK.
 ERROR068 IF E1 TOT CATCH (3.65) IS GREATER THAN ZERO ... THE
 ELEMENTS E1 SPT CATCH (3.69), E1 SPN CATCH (3.72), E1
 OTHER1 CATCH (3.75), AND E1 OTHER2 CATCH (3.78) SHOULD
 BE NON BLANK.
 ERROR069 IF ONEELEMENTS - E1 SPT CATCH (3.69), E1 SPN CATCH
 (3.72), E1 OTHER1 CATCH (3.75), OR E1 OTHER2 CATCH
 (3.78) IS NON BLANK ... EACH OF THE ELEMENTS E1 SPT

CATCH, E1 SPN CATCH, E1 OTHER1 CATCH, AND E1 OTHER2 CATCH SHOULD BE NON BLANK.

ERROR070 IF ONEELEMENTS - E1 SPT CATCH (3.69), E1 SPN CATCH (3.72), E1 OTHER1 CATCH (3.75), OR E1 OTHER2 CATCH (3.78) IS NON BLANK - THE SUM OF THE ELEMENTS E1 SPT CATCH, E1 SPN CATCH, E1 OTHER1 CATCH, AND E1 OTHER2 CATCH MUST EQUAL 100.

ERROR071 IF E2 TOT CATCH (4.11) IS GREATER THAN ZERO ... THE ELEMENTS E2 SPT CATCH (4.15), E2 SPN CATCH (4.18), E2 OTHER1 CATCH (4.21), AND E2 OTHER2 CATCH (4.24) SHOULD BE NON BLANK.

ERROR072 IF ONEELEMENTS - E2 SPT CATCH (4.15), E2 SPN CATCH (4.18), E2 OTHER1 CATCH (4.21), OR E2 OTHER2 CATCH (4.24) IS NON BLANK ... EACH OF THE ELEMENTS E2 SPT CATCH, E2 SPN CATCH, E2 OTHER1 CATCH, AND E2 OTHER2 CATCH SHOULD BE NON BLANK.

ERROR073 IF ONEELEMENTS - E2 SPT CATCH (4.15), E2 SPN CATCH (4.18), E2 OTHER1 CATCH (4.21), OR E2 OTHER2 CATCH (4.24) IS NON BLANK ... THE SUM OF THE ELEMENTS E2 SPT CATCH, E2 SPN CATCH, E2 OTHER1 CATCH, AND E2 OTHER2 CATCH MUST EQUAL 100.

ERROR074 IF E3 TOT CATCH (4.29) IS GREATER THAN ZERO ... THE ELEMENTS E3 SPT CATCH (4.33), E3 SPN CATCH (4.36), E3 OTHER1 CATCH (4.39), AND E3 OTHER2 CATCH (4.42) SHOULD BE NON BLANK.

ERROR075 IF ONEELEMENTS - E3 SPT CATCH (4.33), E3 SPN CATCH (4.36), E3 OTHER1 CATCH (4.39), OR E3 OTHER2 CATCH (4.42) IS NON BLANK ... EACH OF THE ELEMENTS E3 SPT CATCH, E3 SPN CATCH, E3 OTHER1 CATCH, AND E3 OTHER2 CATCH SHOULD BE NON BLANK.

ERROR076 IF ONEELEMENTS - E3 SPT CATCH (4.33), E3 SPN CATCH (4.36), E3 OTHER1 CATCH (4.39), OR E3 OTHER2 CATCH (4.42) IS NON BLANK ... THE SUM OF THE ELEMENTS E3 SPT CATCH, E3 SPN CATCH, E3 OTHER1 CATCH, AND E3 OTHER2 CATCH MUST EQUAL 100.

ERROR077 IF THE SUM OF THE ELEMENTS E1 OTHER1 CATCH (3.75), E2 OTHER1 CATCH (4.21), AND E3 OTHER1 CATCH (4.39) IS GREATER THAN ZERO - OTHER1-CODE CATCH (4.09) SHOULD BE NON BLANK.

ERROR078 IF OTHER1-CODE CATCH (4.09) IS NON BLANK - THE SUM OF THE ELEMENTS E1 OTHER1 CATCH (3.75), E2 OTHER1 CATCH (4.21), AND E3 OTHER1 CATCH (4.39) SHOULD BE GREATER THAN ZERO.

ERROR079 IF THE SUM OF THE ELEMENTS E1 OTHER2 CATCH (3.78), E2 OTHER2 CATCH (4.24), AND E3 OTHER2 CATCH (4.42) IS GREATER THAN ZERO - OTHER-2CODE CATCH (4.27) SHOULD BE NON BLANK.

ERROR080 IF OTHER2-CODE CATCH (4.27) IS NON BLANK - THE SUM OF THE ELEMENTS E1 OTHER2 CATCH (3.78), E2 OTHER2 CATCH (4.24), AND E3 OTHER2 CATCH (4.42) SHOULD BE GREATER THAN ZERO.

ERROR081 IF OBS BST EST CAP (4.45) IS NON BLANK ... THE SUM OF THE ELEMENTS OBS SPT CAP(4.57), OBS EASTERN CAP(4.60) OBS WB CAP (4.63), OBS SPN2 CAP (4.66), OBS OTHR1 CAP (4.69), AND OBS OTHR2 CAP (4.72) MUST BE EQUAL TO 100.

ERROR082 IF THE OBS H1 EST CAP (4.49) IS NON BLANK - THE OBS H1
 EST CAP (4.49) SHOULD BE GREATER THAN BOTH THE OBS BST
 EST CAP (4.45), AND THE OBS L0 EST CAP (4.53).
 ERROR083 IF THE OBS L0 EST CAP (4.53) IS NON BLANK - THE OBS L0
 EST CAP SHOULD BE LESS THAN BOTH THE OBS BST EST CAP
 (4.45), AND THE OBS H1 EST CAP (4.49).
 ERROR084 IF OBS SPT CAP (4.57) IS GREATER THAN ZERO ... OBS SPT
 CD CAP (4.75) SHOULD BE EQUAL TO 02, 06, OR 90.
 ERROR085 IF OBS SPN2 CAP (4.66) IS GREATER THAN ZERO - OBS SPN2
 CD CAP (4.77) SHOULD BE EQUAL TO 03.
 ERROR086 IF OBS OTHR1 CAP (4.69) IS GREATER THAN ZERO ... OBS
 OTHR1 CD CAP (4.79) SHOULD BE GREATER THAN 04.
 ERROR087 IF OBS OTHR2 CAP (4.72) IS GREATER THAN ZERO ... OBS
 OTHR2 CD CAP (5.09) SHOULD BE GREATER THAN 04.
 ERROR088 IF OBS SPT CD CAP (4.75) IS NON BLANK ... OBS SPT CAP
 (4.57) SHOULD BE GREATER THAN ZERO.
 ERROR089 IF OBS SPN2 CD CAP (4.77) IS NON BLANK - OBS SPN2 CAP
 (4.66) SHOULD BE GREATER THAN ZERO.
 ERROR090 IF OBS OTHR1 CD CAP (4.79) IS NON BLANK ... OBS OTHR1
 CAP (4.69) SHOULD BE GREATER THAN ZERO.
 ERROR091 IF OBS OTHR2 CD CAP (5.09) IS NON BLANK ... OBS OTHR2
 CAP (4.72) SHOULD BE GREATER THAN ZERO.
 ERROR092 IF KILL DUE TO NET COLLAPSE (5.14) IS EQUAL TO 1 - THE
 SUM OF THE ELEMENTS TRAP SPT KILL(7.23), TRAP SPN KILL
 (7.26), AND TRAP OTH KILL (7.29) SHOULD BE GTR THAN
 ZERO.
 ERROR093 IF SPDBTS ADJUST BD AREA (5.16) IS EQUAL TO 1 - SPDBTS
 TOW (5.12) SHOULD BE EQUAL TO 1.
 ERROR094 IF RESCUE EFF BEF BD (5.17) IS EQUAL TO 1 ... THE
 ELEMENTS NUM RESCUERS BEF (5.18), RAFT EFF BEF (5.20),
 SPDBT EFF BEF(5.21), SWMR EFF BEF(5.22), OTHR EFF BEF
 (5.23), AND LIVE REL BEF BD(5.24) SHOULD BE NON BLANK.
 ERROR095 IF RESCUE EFF BEF BD (5.17) IS EQUAL TO 2 ... THE
 ELEMENTS NUM RESCUERS BEF (5.18), RAFT EFF BEF (5.20),
 SPDBT EFF BEF(5.21), SWMR EFF BEF(5.22), OTHR EFF BEF
 (5.23), AND LIVE REL BEF BD (5.24) SHOULD BE BLANK.
 ERROR096 IF RESCUE EFF BEF BD (5.17) IS EQUAL TO 1 ... AT LEAST
 ONE OF THE ELEMENTS RAFT EFF BEF (5.20), SPDBT EFF BEF
 (5.21), SWMR EFF BEF(5.22), OR OTHR EFF BEF(5.23) MUST
 BE EQUAL TO 1.
 ERROR097 IF ESCAPED NET AFTER RINGS UP (5.27) IS EQUAL TO 2 ...
 TOT ESCAPED NET AFTER RINGS UP (5.28) SHOULD BE BLANK.
 ERROR098 IF ESCAPED NET AFTER RINGS UP (5.27) IS EQUAL TO 1 ...
 TOT ESCAPED NET AFTER RINGS UP (5.28) SHOULD BE NON
 BLANK
 ERROR099 IF BACKDOWN (5.31) IS EQUAL TO 1 ... THE FOLLOWING
 ELEMENTS SHOULD BE NON BLANK : TIME START BD (5.32),
 NUM BUNCHES (5.36), SUNDOWN Y/N (5.37), LIGHTS Y/N
 (5.38), PNL COVR BD AREA (5.39), NET TIED DOWN (5.40),
 TIME END BD(5.41), BST EST RELS DUR(5.45), H1 EST RELS
 DUR (5.49), L0 EST RELS DUR (5.53), FISH LOSS DUR BD
 (5.57), CANOPIES PRESENT(5.61), CANOPY BD KILL(5.62),
 RESCUE EFF DUR BD (5.63), AND TOT LIVE AFT BD (5.74).
 ERROR100 IF TIME START BD (5.32) IS NON BLANK ... TIME START BD
 SHOULD BE GREATER THAN TIME RINGS UP (3.54).

ERROR101 IF TIME END BD (5.41) IS NON BLANK ... TIME END BD
 SHOULD BE GREATER THAN TIME START BD (5.32).
 ERROR102 IF LIGHTS Y/N (5.38) IS EQUAL TO 1 ... SUNDOWN Y/N
 (5.37) SHOULD BE EQUAL TO 1.
 ERROR103 IF NET TIED DOWN (5.40) IS EQUAL TO 1 ... PNL COVR BD
 AREA SHOULD BE EQUAL TO 1.
 ERROR104 IF BST EST RELS DUR (5.45) IS NON BLANK - BST EST RELS
 DUR SHOULD BE LESS THAN H1 EST RELS DUR (5.49).
 ERROR105 IF BST EST RELS DUR (5.45) IS NON BLANK - BST EST RELS
 DUR SHOULD BE GREATER THAN L0 EST RELS DUR (5.53).
 ERROR106 IF H1 EST RELS DUR (5.49) IS NON BLANK ... H1 EST RELS
 DUR SHOULD BE GREATER THAN L0 EST RELS DUR (5.53).
 ERROR107 IF FISH LOSS DUR BD (5.57) IS EQUAL TO 1 ... NUM LOSS
 DUR BD (5.58) SHOULD BE NON BLANK.
 ERROR108 IF FISH LOSS DUR BD (5.57) IS EQUAL TO 2 ... NUM LOSS
 DUR BD (5.58) SHOULD BE BLANK.
 ERROR109 IF NUM LOSS DUR BD (5.58) IS NON BLANK - FISH LOSS DUR
 BD (5.57) SHOULD BE EQUAL TO 1.
 ERROR110 IF CANOPY BD KILL (5.62) IS EQUAL TO 1 OR 2 - CANOPIES
 PRESENT (5.61) SHOULD EQUAL 1.
 ERROR111 IF CANOPY BD KILL (5.62) IS EQUAL TO 3 ... CANOPIES
 PRESENT (5.61) SHOULD EQUAL 2.
 ERROR112 IF CANOPIES PRESENT (5.61) IS EQUAL TO 1 ... CANOPY BD
 KILL (5.62) SHOULD BE EQUAL TO EITHER 1 OR 2.
 ERROR113 IF CANOPIES PRESENT (5.61) IS EQUAL TO 2 ... CANOPY BD
 KILL (5.62) SHOULD BE EQUAL TO 3.
 ERROR114 IF RESCUE EFF DUR BD (5.63) IS EQUAL TO 1 ... THE
 FOLLOWING ELEMENTS SHOULD BE NON BLANK : NUM RESCUERS
 DUR (5.64), SPDBT EFF DUR (5.66), RAFT EFF DUR (5.67),
 FACEMASK EFF DUR (5.68), SWMR EFF DUR (5.69), OTHR EFF
 DUR (5.70), AND LIVE REL DUR BD (5.71).
 ERROR115 IF RESCUE EFF DUR BD (5.63) IS EQUAL TO 2 ... THE
 FOLLOWING ELEMENTS SHOULD BE BLANK : NUM RESCUERS
 DUR (5.64), SPDBT EFF DUR (5.66), RAFT EFF DUR (5.67),
 FACEMASK EFF DUR (5.68), SWMR EFF DUR (5.69), OTHR EFF
 DUR (5.70), AND LIVE REL DUR BD (5.71).
 ERROR116 IF RESCUE EFF DUR BD (5.63) IS EQUAL TO 1 ... AT LEAST
 ONE OF THE ELEMENTS SPDBT EFF DUR (5.66), RAFT EFF DUR
 (5.67), FACEMASK EFF DUR (5.68), SWMR EFF DUR (5.69),
 OR OTHR EFF DUR (5.70) MUST BE EQUAL TO 1.
 ERROR117 IF FACEMASK EFF DUR (5.68) IS EQUAL TO 1 ... AT LEAST
 ONE OF THE ELEMENTS SPDBT EFF DUR (5.66), RAFT EFF DUR
 (5.67) OR SWMR EFF DUR (5.69) MUST BE EQUAL TO 1
 ERROR118 IF TOT LIVE AFT BD (5.74) IS EQUAL TO ZERO ... THE
 FOLLOWING ELEMENTS SHOULD BE EQL TO 2 : RELS RAFT AFT
 BD (6.09), RELS BOAT AFT BD (6.14), RELS SWMR AFT BD
 (6.19), RELS OTHR AFT BD(6.24), RELS DECK AFT BD(6.31)
 , ESCAP AFT BD (6.35), AND RELS SACK AFT BD (6.47).
 ERROR119 IF TOT LIVE AFT BD (5.74) IS GREATER THAN ZERO ... AT
 LEAST ONE OF THE FOLLOWING ELEMENTS SHOULD EQUAL 1 :
 RELS RAFT AFT BD (6.09), RELS BOAT AFT BD (6.14), RELS
 SWMR AFT BD (6.19), RELS OTHR AFT BD (6.24), RELS DECK
 AFT BD(6.31), ESCAP AFT BD(6.35), OR RELS SACK AFT BD
 (6.47).
 ERROR120 IF THE SUM OF THE ELEMENTS NUM REL RAFT AFT(6.11), NUM

REL BOAT AFT (6.16), NUM REL SWMR AFT (6.21), NUM REL OTHR AFT(6.26), NUM REL DECK AFT(6.32), NUM ESCAP AFT BD (6.36), NUM LIV SRT SACK (6.44), NUM REL SACK AFT (6.49), AND NUM LIV BEF BRAL (6.57) IS GTR THAN ZERO ... TOT LIV AFT BD (5.74) MUST BE GREATER THAN ZERO.

ERROR121 IF THE SUM OF THE ELEMENTS NUM REL RAFT AFT(6.11), NUM REL BOAT AFT (6.16), NUM REL SWMR AFT (6.21), NUM REL OTHR AFT(6.26), NUM REL DECK AFT(6.32), NUM ESCAP AFT BD (6.36), AND NUM REL SACK AFT (6.49) IS GREATER THAN ZERO ... THIS SUM SHOULD BE EQUAL TO OR LESS THAN TOT LIVE AFT BD (5.74).

ERROR122 IF THE SUM OF THE ELEMENTS NUM REL RAFT AFT(6.11), NUM REL BOAT AFT (6.16), NUM REL SWMR AFT (6.21), NUM REL OTHR AFT(6.26), NUM REL DECK AFT(6.32), NUM ESCAP AFT BD (6.36), AND NUM REL SACK AFT (6.49) IS GREATER THAN ZERO ... THIS SUM SHOULD BE EQUAL TO THE SUM OF KNOWN LIVE AND LIVE INJURED PORPOISE RECORDED ON THE TALLY SHEET (CARD 9, COL 34 THRU CARD 11, COL 80).

ERROR123 IF THE SUM OF KNOWN LIVE AND LIVE INJURED PORPOISE RECORDED ON THE TALLY SHEET (CARD 9, COL 34 - CARD 11, COL 80) IS GREATER THAN ZERO ... THIS SUM SHOULD BE EQUAL TO OR LESS THAN TOT LIVE AFT BD (5.74).

ERROR124 IF RELS RAFT AFT BD (6.09) IS EQUAL TO 1 ... NUM MEN RAFT AFT (6.10) AND NUM REL RAFT AFT (6.11) SHOULD BE NON BLANK.

ERROR125 IF RELS RAFT AFT BD (6.09) IS EQUAL TO 2 ... NUM MEN RAFT AFT (6.10) AND NUM REL RAFT AFT (6.11) SHOULD BE BLANK.

ERROR126 IF RELS BOAT AFT BD (6.14) IS EQUAL TO 1 ... NUM MEN BOAT AFT (6.15) AND NUM REL BOAT AFT (6.16) SHOULD BE NON BLANK.

ERROR127 IF RELS BOAT AFT BD (6.14) IS EQUAL TO 2 ... NUM MEN BOAT AFT (6.15) AND NUM REL BOAT AFT (6.16) SHOULD BE BLANK.

ERROR128 IF RELS SWMR AFT BD (6.19) IS EQUAL TO 1 ... NUM SWMR AFT BD(6.20) AND NUM REL SWMR AFT(6.21) SHOULD BE NON BLANK.

ERROR129 IF RELS SWMR AFT BD (6.19) IS EQUAL TO 2 ... NUM SWMR AFT BD (6.20) AND NUM REL SWMR AFT (6.21) SHOULD BE BLANK.

ERROR130 IF RELS OTHR AFT BD (6.24) IS EQUAL TO 1 ... NUM MEN OTHR AFT (6.25) AND NUM REL OTHR AFT (6.26) SHOULD BE NON BLANK.

ERROR131 IF RELS OTHR AFT BD (6.24) IS EQUAL TO 2 ... NUM MEN OTHR AFT (6.25) AND NUM REL OTHR AFT (6.26) SHOULD BE BLANK.

ERROR132 IF NUM RESCUERS AFT (6.29) IS EQUAL TO ZERO - EACH OF THE ELEMENTS : RELS RAFT AFT BD (6.09), RELS BOAT AFT BD(6.14), RELS SWMR AFT BD (6.19), AND RELS OTHR AFT BD(6.24) MUST BE EQUAL TO 2.

ERROR133 IF NUM RESCUERS AFT (6.29) IS GREATER THAN ZERO ... AT LEAST ONE OF THE ELEMENTS : RELS RAFT AFT BD (6.09), RELS BOAT AFT BD (6.14), RELS SWMR AFT BD (6.19), OR RELS OTHR AFT BD (6.24) MUST EQUAL 1.

ERROR134 IF RELS DECK AFT BD (6.31) IS EQUAL TO 1 ... NUM REL

DECK AFT (6.32) SHOULD BE NON BLANK.

ERROR135 IF RELS DECK AFT BD (6.31) IS EQUAL TO 2 ... NUM REL DECK AFT (6.32) SHOULD BE BLANK.

ERROR136 IF ESCAP AFT BD (6.35) IS EQUAL TO 1 ... NUM ESCAP AFT BD (6.36) SHOULD BE NON BLANK.

ERROR137 IF ESCAP AFT BD (6.35) IS EQUAL TO 2 ... NUM ESCAP AFT BD (6.36) SHOULD BE BLANK.

ERROR138 IF SACKUP (6.39) IS EQUAL TO 1 ... THE ELEMENTS : TIME START SACK (6.40), NUM LIV SRT SACK (6.44), AND RELS SACK AFT BD (6.47) SHOULD BE NON BLANK.

ERROR139 IF SACKUP (6.39) IS EQUAL TO 2 ... THE ELEMENTS : TIME START SACK (6.40), NUM LIV SRT SACK (6.44), AND RELS SACK AFT BD (6.47) SHOULD BE BLANK.

ERROR140 IF TIME START SACK (6.40) IS NON BLANK ... TIME START SACK SHOULD BE GREATER THAN TIME END BD (5.41).

ERROR141 IF RELS SACK AFT BD (6.47) IS EQUAL TO 1 ... THE ELEMENTS NUM MEN SACK AFT (6.48), AND NUM REL SACK AFT (6.49) SHOULD BE NON BLANK.

ERROR142 IF RELS SACK AFT BD (6.47) IS EQUAL TO 2 ... THE ELEMENTS NUM MEN SACK AFT (6.48), AND NUM REL SACK AFT (6.49) SHOULD BE BLANK.

ERROR143 IF NUM LIV SRT SACK (6.44) IS GREATER THAN ZERO ... RELS SACK AFT BD (6.47) SHOULD BE EQUAL TO 1.

ERROR144 IF NUM LIV SRT SACK (6.44) IS GREATER THAN ZERO - NUM LIV SRT SACK SHOULD BE EQUAL TO OR LESS THAN TOT LIVE AFT BD (5.74).

ERROR145 IF NUM LIV BEF BRAL (6.57) IS GREATER THAN ZERO - NUM LIV BEF BRAL SHOULD BE EQL TO OR LESS THAN EACH OF THE ELEMENTS NUM LIV SRT SACK (6.44), AND TOT LIVE AFT BD (5.74).

ERROR146 IF BRAILING (6.52) IS EQUAL TO 1 ... THE ELEMENTS TIME START BRAIL (6.53), NUM LIV BEF BRAL (6.57), AND TIME END BRAIL (6.60) SHOULD BE NON BLANK.

ERROR147 IF BRAILING (6.52) IS EQUAL TO 2 ... THE ELEMENTS TIME START BRAIL (6.53), NUM LIV BEF BRAL (6.57), AND TIME END BRAIL (6.60) SHOULD BE BLANK.

ERROR148 IF BRAILING (6.52) IS EQUAL TO 1 ... SACKUP (6.39) SHOULD BE EQUAL TO 1.

ERROR149 IF TIME START BRAIL (6.53) IS NON BLANK ... TIME START BRAIL SHOULD BE GREATER THAN TIME START SACK (6.40).

ERROR150 IF TIME END BRAIL (6.60) IS NON BLANK - TIME END BRAIL SHOULD BE GREATER THAN TIME START BRAIL (6.53).

ERROR151 IF BRAILING (6.52) IS EQUAL TO 1 ... THE SUM OF THE ELEMENTS TONS YF(6.75), TONS SK(6.78), AND TONS OTHER (7.09) SHOULD BE GREATER THAN ZERO.

ERROR152 IF TIME END SET (6.64) IS NON BLANK ... TIME END SET SHOULD BE GREATER THAN THE LAST TIME-ELEMENT RECORDED IN THIS SET.

ERROR153 IF KNOWN KILLED (6.69) IS EQUAL TO ZERO ... THE SUM OF THE KILL ELEMENTS ON THE TALLY SHEET (CARD 08 , COL 09 THRU CARD 09 , COL 32) SHOULD BE EQL TO ZERO. IF KNOWN KILLED IS GREATER THAN ZERO ... KNOWN KILLED SHOULD BE EQL TO THE SUM OF THE KILL ELEMENTS ON THE TALLY SHEET

ERROR154 IF KNOWN INJURED (6.73) IS EQUAL TO ZERO - THE SUM OF THE INJURED ELEMENTS ON THE TALLY SHEET (CARD 10 , COL

57 - CARD 11 COL 80, AND CARD 13 COL 33 THRU CARD 14 COL 56) SHOULD BE EQUAL TO ZERO. IF KNOWN INJURED IS GTR THAN ZERO .. KNOWN INJURED SHOULD BE EQUAL TO OR GREATER THAN THE SUM OF THE INJURED ELEMENTS ON THE TALLY SHEET.

ERROR155 IF TONS OTHER (7.09) IS EQUAL TO ZERO ... OTHER FISH CODE (7.12) SHOULD BE BLANK.

ERROR156 IF TONS OTHER (7.09) IS GREATER THAN ZERO - OTHER FISH CODE (7.12) SHOULD BE NON BLANK.

ERROR157 IF CANOPY BD KILL (5.62) IS EQUAL TO 1 ... THE SUM OF THE ELEMENTS TRAP SPT KILL(7.23), TRAP SPN KILL(7.26), AND TRAP OTH KILL (7.29) SHOULD BE GREATER THAN ZERO.

ERROR158 IF THE SUM OF THE ELEMENTS SACKUP SPT KILL (7.32), SACKUP SPN KILL (7.35), AND SACKUP OTH KILL (7.38) IS GREATER THAN ZERO - NUM LIV SRT SACK (6.44) SHOULD BE GREATER THAN ZERO.

ERROR159 IF THE SUM OF THE ELEMENTS TANGL OTH KILL (7.20), TRAP OTH KILL(7.29), SACKUP OTH KILL(7.38), OTHER OTH KILL (7.47), AND UNK OTH KILL (7.56) IS GREATER THAN ZERO - OTHER SPC KILL (7.59) SHOULD BE NON BLANK.

ERROR160 IF THE SUM OF THE ELEMENTS TANGL OTH KILL (7.20), TRAP OTH KILL(7.29), SACKUP OTH KILL(7.38), OTHER OTH KILL (7.47), AND UNK OTH KILL (7.56) IS EQUAL TO ZERO ... OTHER SPC KILL (7.59) SHOULD BE BLANK.

ERROR161 IF KNOWN KILLED (6.69) IS EQUAL TO ZERO ... THE FOLLOWING ELEMENTS SHOULD BE BLANK : TANGL SPT KILL (7.14), TANGL SPN KILL (7.17), TANGL OTH KILL (7.20), TRAP SPT KILL (7.23), TRAP SPN KILL (7.26), TRAP OTH KILL (7.29), SACKUP SPT KILL (7.32), SACKUP SPN KILL (7.35), SACKUP OTH KILL (7.38), OTHER SPT KILL (7.41), OTHER SPN KILL (7.44), OTHER OTH KILL (7.47), UNK SPT KILL (7.50), UNK SPN KILL (7.53), AND UNK OTH KILL (7.56).

ERROR162 IF KNOWN KILLED (6.69) IS GREATER THAN ZERO ... THE FOLLOWING ELEMENTS SHOULD BE NON BLANK: TANGL SPT KILL (7.14), TANGL SPN KILL (7.17), TANGL OTH KILL (7.20), TRAP SPT KILL (7.23), TRAP SPN KILL (7.26), TRAP OTH KILL (7.29), SACKUP SPT KILL (7.32), SACKUP SPN KILL (7.35), SACKUP OTH KILL (7.38), OTHER SPT KILL (7.41), OTHER SPN KILL (7.44), OTHER OTH KILL (7.47), UNK SPT KILL (7.50), UNK SPN KILL (7.53), AND UNK OTH KILL (7.56).

ERROR163 IF THE SUM OF THE SPOTTER KILL ELEMENTS ON THE TALLY SHEET (CARD 08 , COLS 09 THRU 56) IS GREATER THAN ZERO THE SUM OF THE FOLLOWING ELEMENTS SHOULD BE EQUAL TO 100 : TANGL SPT KILL (7.14), TRAP SPT KILL (7.23), SACKUP SPT KILL (7.32), OTHER SPT KILL (7.41), AND UNK SPT KILL (7.50).

ERROR164 IF THE SUM OF THE SPINNER KILL ELEMENTS ON THE TALLY SHEET (CARD 08 , COLS 57 THRU 80 AND CARD 09, COLS 9 THRU 11) IS GTR THAN ZERO, THE SUM OF THE FOLLOWING ELEMENTS SHOULD BE EQUAL TO 100; TANGL SPN KILL(7.17), TRAP SPN KILL(7.24), SACKUP SPN KILL(7.35), OTHER SPN KILL(7.44), AND UNK SPN KILL(7.53).

ERROR165 IF THE SUM OF THE OTHER SPECIES AND UNIDENTIFIED KILL

ELEMENTS ON THE TALLY SHEET(CARD 09 , COLS 12 THRU 32)
IS GREATER THAN ZERO ... THE SUM OF THE FOLLOWING
ELEMENTS SHOULD BE EQL TO 100 : TANGL OTH KILL (7.20),
TRAP OTH KILL(7.29), SACKUP OTH KILL(7.38), OTHER OTH
KILL (7.47), AND UNK OTH KILL (7.56).

- ERROR166 IF MALF DELAY SET (7.62) IS EQUAL TO 1 OR 2 ... EQUIP
MALF (7.61) SHOULD BE EQUAL TO 1.
- ERROR167 IF MALF DELAY SET (7.62) IS EQUAL TO 3 ... EQUIP MALF
(7.61) SHOULD BE EQUAL TO 2.
- ERROR168 IF MALF DELAY SET (7.62) IS EQUAL TO 1 - MALF DELAY IN
MINUTES (7.63) SHOULD BE NON BLANK.
- ERROR169 IF MALF DELAY SET (7.62) IS EQUAL TO 2 OR 3 ... MALF
DELAY IN MINUTES (7.63) SHOULD BE BLANK.
- ERROR170 IF PORP IN NET (7.66) IS EQUAL TO 1 OR 2 - EQUIP MALF
(7.61) SHOULD BE EQUAL TO 1.
- ERROR171 IF PORP IN NET (7.66) IS EQUAL TO 3 ... MALF DELAY SET
(7.62) SHOUDL BE EQUAL TO 2 OR 3.
- ERROR172 IF SET ABORTED (7.67) IS EQUAL TO 1 ... TIME SET ABORT
(7.68) SHOULD BE NON BLANK.
- ERROR173 IF SET ABORTED (7.67) IS EQUAL TO 2 ... TIME SET ABORT
(7.68) SHOULD BE BLANK.
- ERROR174 IF NET DUMPED (7.72) IS EQUAL TO 1 ... TIME NET DUMPED
(7.73) SHOULD BE NON BLANK.
- ERROR175 IF NET DUMPED (7.72) IS EQUAL TO 2 ... TIME NET DUMPED
(7.73) SHOULD BE BLANK.
- ERROR176 IF SET ABORTED (7.67) IS EQUAL TO 1 ... NET DUMPED
(7.72) SHOULD BE EQUAL TO 2.
- ERROR177 IF NET DUMPED (7.72) IS EQUAL TO 1 ... SET ABORTED
(7.67) SHOULD BE EQUAL TO 2.
- ERROR178 IF THE SUM OF THE SPOTTER ELEMENTS RECORDED ON THE
TALLY SHEET (CARD 08 , COLS 09 THRU 56 ; CARD 09, COLS
33 THRU 80 ; CARD 10 , COLS 57 THRU 80 ; CARD 11, COLS
09 THRU 32 ; CARD 12 , COLS 09 THRU 56 ; CARD 13, COLS
33 THRU 80) IS GREATER THAN ZERO ... SPC TALY SPT
(14.61) SHOULD BE NONBLANK.
- ERROR179 IF THE SUM OF THE SPOTTER ELEMENTS RECORDED ON THE
TALLY SHEET (CARD 08 , COLS 09 THRU 56 ; CARD 09, COLS
33 THRU 80 ; CARD 10 , COLS 57 THRU 80 ; CARD 11, COLS
09 THRU 32 ; CARD 12 , COLS 09 THRU 56 ; CARD 13, COLS
33 THRU 80) IS EQUAL TO ZERO ... SPC TALY SPT (14.61)
SHOULD BE BLANK.
- ERROR180 IF THE SUM OF OTHER SPINNER ELEMENTS RECORDED ON THE
TALLY SHEET (CARD 08 , COLS 75 THRU 80 ; CARD 09, COLS
09 THRU 11 ; CARD 10 , COLS 27 THRU 35 ; CARD 11, COLS
51 THRU 59 ; CARD 12 , COLS 75 THRU 80 ; CARD 13, COLS
09 THRU 11 ; CARD 14 , COLS 27 THRU 35) IS GTR THAN
ZERO ... SPC TALY SPN (14.63) SHOULD BE NON BLANK.
- ERROR181 IF THE SUM OF OTHER SPINNER ELEMENTS RECORDED ON THE
TALLY SHEET (CARD 08 , COLS 75 THRU 80 ; CARD 09, COLS
09 THRU 11 ; CARD 10 , COLS 27 THRU 35 ; CARD 11, COLS
51 THRU 59 ; CARD 12 , COLS 75 THRU 80 ; CARD 13, COLS
09 THRU 11 ; CARD 14 , COLS 27 THRU 35) IS EQL TO ZERO
... SPC TALY SPN (14.63) SHOULD BE BLANK.
- ERROR182 IF THE SUM OF THE OTHER SP1 ELEMENTS RECORDED ON THE
TALLY SHEET (CARD 09, COLS 12 THRU 20 ; CARD 10, COLS

36 THRU 44 ; CARD 11, COLS 60 THRU 68 ; CARD 13, COLS 12 THRU 20 ; CARD 14 , COLS 36 THRU 44) IS GTR THAN ZERO ... SPC TALY SP1 (14.57) SHOULD BE NON BLANK.

ERROR183 IF THE SUM OF THE OTHER SP1 ELEMENTS RECORDED ON THE TALLY SHEET (CARD 09 , COLS 12 THRU 20 ; CARD 10, COLS 36 THRU 44 ; CARD 11 , COLS 60 THRU 68 ; CARD 13, COLS 12 THRU 20 ; CARD 14 , COLS 36 THRU 44) IS EQL TO ZERO ... SPC TALY SP1 (14.57) SHOULD BE BLANK.

ERROR184 IF THE SUM OF THE OTHER SP2 ELEMENTS RECORDED ON THE TALLY SHEET (CARD 09 , COLS 21 THRU 29 ; CARD 10, COLS 45 THRU 53 ; CARD 11 , COLS 69 THRU 77 ; CARD 13, COLS 21 THRU 29 ; CARD 14 , COLS 45 THRU 53) IS GTR THAN ZERO ... SPC TALY SP2 (14.59) SHOULD BE NON BLANK.

ERROR185 IF THE SUM OF THE OTHER SP2 ELEMENTS RECORDED ON THE TALLY SHEET (CARD 09 , COLS 21 THRU 29 ; CARD 10, COLS 45 THRU 53 ; CARD 11 , COLS 69 THRU 77 ; CARD 13, COLS 21 THRU 29 ; CARD 14 , COLS 45 THRU 53) IS EQL TO ZERO ... SPC TALY SP2 (14.59) SHOULD BE BLANK.

ERROR188 IN THIS PORPOISE SET, IF TIME CHASE BEGAN(1.28) IS NON BLANK - THE CONCATENATED DATE/TIME CHASE BEGAN MUST BE GTR THAN THE LAST CONCATENATED DATE/(NON BLANK) TIME OF THE PREVIOUS SET.

ERROR190 IF BACKDOWN (5.31) IS EQUAL TO 2 ... EACH OF THE FOLLOWING ELEMENTS SHOULD BE EQUAL TO 3 : BOAT TOW BEF BD (5.21), COLLAPSE BEF BD (5.13), COLLAPSE KIL BEF (5.14), BOAT INFLU PORP (5.15), AND BOAT ADJ BD AREA (5.16).

ERROR191 IF THE SUM OF KNOWN LIVE AND LIVE INJURED PORPOISE RECORDED ON THE TALLY SHEET (CARD 9, COL 33 - CARD 11 , COL 80) IS GREATER THAN ZERO ... THIS SUM SHOULD BE EQUAL TO THE SUM OF THE FOLLOWING ELEMENTS : NUM REL RAFT AFT (6.11), NUM REL BOAT AFT (6.16), NUM REL SWMR AFT (6.21), NUM REL OTHR AFT (6.26), NUM REL DECK AFT (6.32), NUM ESCAP AFT BD (6.36), AND NUM REL SACK AFT (6.49).

1979-1980 Fishing Mode Record (formerly Vessel Activity) Data.

1979-1980

NO FOG OR RAIN = 1
FOG = 2
RAIN = 3
FOG AND RAIN = 4

1979-1980 Fishing Mode Record, formerly Vessel Activity, Data:
BLANK, RANGE, and LOGICAL error criteria

1979-1982 Fishing Mode Record Form
Data Element Blankness and Range Editing Specifications

Record 1 of 1

Data Element	Columns	Character type	Blankness OK?	Range Lower Upper	
Cruise number	1-3	N	No	450	590 (1979)
Cruise number	1-3	N	No	570	700 (1980)
Cruise number	1-3	N	No	670	785 (1981)
Cruise number	1-3	N	No	769	884 (1982)
Observer number	4-5	N	No	1	340 (1979)
Observer number	4-5	N	No	1	340 (1980)
VA TYPE (affects cols 34-35)	4-5	C	No	"std" or "log"	(1981)
VA TYPE (affects cols 34-35)	4-5	C	No	"std" or "log"	(1982)
Year*	7-8	N	No	79	82
Month	9-10	N	No	1	12
Day	11-12	N	No	1	31
Time of Activity Change	13-16	N	No	1	10
Hour	13-14	N	No	0	23
Minutes	15-16	N	No	0	59
Searching ? (Yes/No)	17-17	N	No	1	2
Speed (knots & implied 10ths)	18-20	N	Yes	0	180
Number of 20X binoculars	21-21	N	Yes	0	4
Surf temp (F & implied 10ths)	22-24	N	Yes	600	890
Beaufort	25-25	N	Yes	0	6
Fog/Rain code	26-26	N	Yes	1	4
Chase or Set ? (Yes/No)	27-27	N	No	1	2
Set Number	28-30	N	Yes	1	125
Set Type code	31-32	N	Yes	1	8
Inactive or Running ? (Yes/No)	33-33	N	No	1	2
Inactive or Running code	34-35	N	Yes	1	11 (1979)
Inactive or Running code	34-35	N	Yes	1	11 (1980)
Inactive or Running code	34-35	N	Yes	1	25 (1981)
Inactive or Running code	34-35	N	Yes	1	25 (1982)

A = Alpha

B = Blank

N = Numeric

* Each years data was edited for that year.

VAEDIT79

- ERROR001 IF THE PRESENT OCCURRENCE OF OBSERVER(1.04) IS NOT EQL TO THE PREVIOUS OCCURANCE OF OBSERVER ... CHECK TO SEE THAT THE PREVIOUS OBSERVER WAS REPLACED ON THE PRESENT DATE.
- ERROR002 IF THE PRESENT OCCURANCE OF DAY (1.11) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF DAY - THE PREVIOUS OCCURANCE OF SEARCHING (1.17) MUST BE EQUAL TO 2.
- ERROR003 IF THE PRESENT OCCURANCE OF DAY (1.11) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF DAY - THE PREVIOUS OCCURANCE OF CHASE OR SET (1.27) MUST BE EQUAL TO 2.
- ERROR004 IF THE PRESENT OCCURANCE OF DAY (1.11) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF DAY - THE PREVIOUS OCCURANCE OF DRIFT OR RUN (1.33) MUST BE EQUAL TO 1.
- ERROR005 IF THE PRESNET OCCURANCE OF DAY (1.11) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF DAY - THE PREVIOUS OCCURANCE OF DRIFT RUN CODE (1.34) MUST BE NOT EQUAL TO 4.
- ERROR006 IF THE PRESENT OCCURANCE OF DAY (1.11) IS NOT EQUAL TO THE PREVIOUS OCCURANCE OF DAY - THE PREVIOUS OCCURANCE OF DRIFT RUN CODE (1.34) MUST BE NOT EQUAL TO 8.
- ERROR007 IF DRIFT OR RUN (1.33) IS EQUAL TO 1 ... THE DRIFT RUN CODE (1.34) MUST BE EQL TO 1, OR 4, OR 7, OR 8, OR 11.
- ERROR008 THIS IS THE LAST RECORD IN THE VESSEL ACTIVITY FILE - THE DRIFT RUN CODE (1.34) SHOULD BE 08.
- ERROR010 IF THE PRESENT OCCURRENCE OF SEARCHING(1.17) IS EQL TO 1, AND IF THE PREVIOUS OCCURANCE OF SEARCHING IS EQUAL TO 1 - ONE OF THE PRESENT OCCURRENCES OF SPEED (1.18), NUM BINOCULARS (1.21), SURF TEMP (1.22), SEA STATE (1.25), OR FOG OR RAIN (1.26) MUST BE NOT EQUAL TO ONE OF THE PREVIOUS OCCURANCES OF SPEED, NUM BINOCULARS, SURF TEMP, SEA STATE, OR FOG OR RAIN.
- ERROR011 IF THE PRESENT OCCURRENCE OF CHASE OR SET(1.27) IS EQL TO 1 - THE PREVIOUS OCCURANCE OF CHASE OR SET MUST BE EQUAL TO 2.
- ERROR012 IF THE PRESENT OCCURANCE OF DRIFT OR RUN (1.33) IS EQL TO 1, AND IF THE PREVIOUS OCCURANCE OF DRIFT OR RUN IS EQUAL TO 1 ... THE PRESENT OCCURANCE OF DRIFT RUN CODE (1.34) MUST BE NOT EQUAL TO THE PREVIOUS OCCURANCE OF DRIFT RUN CODE.
- ERROR013 IF THE SUM OF THE ELEMENTS SEARCHING (1.17) , CHASE OR SET (1.27) , AND DRIFT OR RUN (1.33) IS NOT EQUAL TO 5 ... THIS CONSTITUTES AN ERROR.
- ERROR016 IF SEARCHING (1.17) IS EQUAL TO 1 - THE ELEMENTS SPEED (1.18), NUM BINOCULARS (1.21), SURF TEMP (1.22), SEA STATE(1.25), AND FOG OR RAIN(1.26) SHOULD BE NON BLANK
- ERROR017 IF SEARCHING (1.17) IS EQUAL TO 2 - THE ELEMENTS SPEED (1.18), NUM BINOCULARS (1.21), SURF TEMP (1.22), SEA STATE (1.25), AND FOG OR RAIN (1.26) SHOULD BE BLANK.
- ERROR018 IF CHASE OR SET (1.27) IS EQUAL TO 1 ... THE SET TYPE (1.31) SHOULD BE NON BLANK.
- ERROR019 IF SET TYPE (1.31) IS NON BLANK, AND IF SET TYPE IS NOT EQUAL TO 02 ... THE SET (1.28) SHOULD BE NON BLANK.
- ERROR020 IF THE PRESENT OCCURANCE OF SET (1.28) IS NON BLANK -

THE PRESENT OCCURANCE OF SET MUST BE EQUAL TO THE LAST
NON BLANK OCCURANCE OF SET + 1.

ERROR021 IF CHASE OR SET (1.27) IS EQUAL TO 2 ... THE ELEMENTS
SET (1.28), AND SET TYPE (1.31) SHOULD BE BLANK.

ERROR022 IF DRIFT OR RUN (1.33) IS EQUAL TO 1 ... THE DRIFT RUN
CODE (1.34) SHOULD BE NON BLANK.

ERROR023 IF DRIFT OR RUN (1.33) IS EQUAL TO 2 ... THE DRIFT RUN
CODE (1.34) SHOULD BE BLANK.

ERROR024 IF THE PRESENT OCCURRENCE OF SET TYPE (1.31) IS EQL TO
02 , AND THE PRESENT OCCURANCE OF SET (1.28) IS NON
BLANK ... THE PREVIOUS OCCURANCE OF DRIFT RUN CODE
(1.34) MUST BE NOT EQUAL TO 04.

Comments on the production and execution of the cross-database editing criteria 1974-1979.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southwest Fisheries Center
P.O. Box 271
La Jolla, CA 92038

January 13, 1981

F/SWC1

TO: Tim Smith
Leader, Marine Mammal Assessment & Monitoring Program

FROM: Chuck Oliver *Chuck K. Oliver*
Computer Specialist

SUBJECT: Cross Data Base Edits

During September 1980, computer runs of the cross data base edits (X-DB) were executed for the 1974-1979 data bases. Each years edit performs error checks on four sets of data bases, (MS→ME, SL→MS, VA→ME, VA→SL). The output is a report on the frequency of occurrence of unique error types by data set and the actual data in error in a format similar to the standard porpoise edits. The former is useful in assessing the magnitude of possible errors and in a subjective analysis of the overall quality of the data. The latter allows for the manual review and revision of the data bases once revision criteria is developed.

It is apparent from the volume of edit output that review/revision of the 1974-1979 data is going to be a large task. In order to begin assessment of the task, I have agreed to put forth a plan from which some immediate work can begin (Attachment 1). Modifications to the edit programs will provide additional information on the magnitude of the apparent errors as well as identify any cruises that are excessively in error.

My recommendation is to begin review of the edit output for a single years data using the criteria set forth in item I only. A revision file would be completed and executed prior to any further work. Concurrent with this effort, the subroutine and data base (ERRLOG.DP, EC--DB) that indicate the frequency of a given error should be modified to produce output on a cruise basis. I also suggest that a count be maintained of the number of cases where errors are not found for each error check. This will provide some indication as to the magnitude of the error occurrence within the data set. Since we have limited resources, it may be that we can accept some known degree of errors of a certain type due to the volume of data in hand. I will leave this difficult decision to the outcome of our present effort.



Once this is accomplished, I would rerun the X-DB program for the year I had corrected but without requesting the full edit output. Review of the error frequency output may indicate certain curises are responsible for the majority of errors, in which case decisions on how to correct will not effect all the data.

As a final word of caution, it must be remembered that revision to one data base based upon the error condtion indicated by some data set (i.e., position change in MS due to SL+MS edit) may induce a new error in another data set (i.e., MS+ME). The absolute errors, and any obvious miscoding, keypunch or contradictory situation errors will eventually dissappear. This may not be the case with some of the more qualitative checks.

Attachment 2 is the output of frequency of errors by data set and year for the computer runs executed in September 1980 for the 1974-1979 data bases. The current subroutine and error count data base (ERRLOG.DP, EC--DB) do not address the number of cases where errors are looked for. Rather they record when errors are found. Modification to address both areas will allow us to know the percentage of errors occurring in the data base by error type, curise and data set. The 1980 X-DB runs can occur when all 1980 data is on the INFONET system. The 1981 X-DB programs exist and will require one modification to the VA81ME subroutine and ES81DB data base regarding error statement 002. Frank Ralston has the deatails. Attachment 3 is the error statements for 1979. Frank Ralston has copies of the error statements for 1974-1981.

Good luck!!

Enclosure
cc w/o encl: G. Sakagawa
B. Perrin
cc w/encl: B. Wahlen
F. Ralston

Attachment 1

X-DB Review/Revision Criteria

1. Identical elements exist within separate data base files. Absolute equality is required in such situations. Comparison of source data with data base value will expose miscoding, keypunch errors, etc. If the error is not correctable in this manner, then the driver data base (i.e., SL in the SL → MS), should be assured to have the correct value. Elements which are of this nature include:

1. DATE
2. TIME OF DAY
3. SET NUMBER
4. SET TYPE CODE
5. HEMISPHERE CODE
6. Certain species codes
7. Certain CREW indications of species present which are defined by time periods.
8. Certain OBSERVER indications of species present.

The following is a list of errors by data set which should be checked and corrected prior to any subjective revisions that may follow.

- | | |
|------------|------------------------|
| 1. MS → ME | None |
| 2. SL → MS | :Errors 1,2,3,4,5,6,23 |
| 3. VA → ME | None |
| 4. VA → SL | :Errors 1,2,3,4,5,6 |

2. In certain error checks, situations are addressed which are contradictory between data bases. As a first step, the source data should be compared with the data base values to identify obvious miscoding and/or keypunch errors. If this does not result in correction of the error, then the situation definition as described in the error statement should be used to

determine the correction method. This may entail elimination of inappropriate data as in Marine Mammal Effort Watch records occurring when the vessel is in port (i.e., VA→ME error #1). Again, the driver data base (VA in the VA→ME should be assumed to be more accurate.

The following list of errors by data set should be checked and corrected subsequent to the absolute error checks and prior to any further subjective checks.

- | | |
|----------|-----------------|
| 1. MS→ME | None |
| 2. SL→MS | None |
| 3. VA→ME | :Errors 1,2,3,4 |
| 4. VA→SL | None |

3. In certain error checks, situations are addressed which are possibly in error. These errors can only be due to miscoding or keypunching mistakes. No subjective criteria is assumed. To correct these errors, the revisor should only correct obvious mistakes by comparing the source data with the data base values. If there is no obvious mistake, then the "error" should be left alone.

- | | |
|----------|--------------|
| 1. MS→ME | :Errors 4 |
| 2. SL→MS | :Errors 9,10 |
| 3. VA→ME | :Errors 7 |
| 4. VA→SL | None |

4. The following checks were done to both identify possible errors and to yield some indication as to the tightness of the data sources. Primarily these checks involve radial distance between two recorded positions. The same positions are compared and unique error number are generated for various radial distance criteria. Errors 1,2,3 and 4 of the MS→ME compare Sighting positions with calculated Effort positions and indicate an error if the radial distance is greater than 2,5,10 or 20 miles respectively. Thus all error #1's are a subset of all error #'s 2,3 and 4. The same general comparisons are true for the following:

- | | |
|----------|------------------|
| 1. MS→ME | :Errors 1,2,3,4 |
| 2. SL→MS | :Errors 7,8,9,10 |
| 3. VA→ME | None |
| 4. VA→SL | None |

All of these errors could be checked for miscoding or keypunch mistakes but this seems inappropriate at this stage. I suggest that those errors indicating excessive radial distances (MS→ME #4, SL→MS #9,10), be checked for obvious errors and corrected if apparent miscoding or keypunch mistakes are evident. I then suggest that some subjective synopsis of the situation, perhaps on a cruise basis, be prepared for the record.

5. The following checks were done to yield some indications as to the degree of tightness in the data; or to indicate different definitions of situations between data bases ("effort" in the VA or ME).

- | | |
|------------|---------------|
| 1. MS → ME | None |
| 2. SL → MS | :Errors 11-22 |
| 3. VA → ME | :Errors 5,6 |
| 4. VA → SL | None |

Review of these errors will be very slow and correction will require very explicit instructions not yet developed. In fact, the errors may be more of a definition error than a field collection one. If this is the case, correction of the original field data may be impossible. Perhaps a subjective synopsis of the situation, on a cruise basis, would be of value to the record.

RUNNING CROSS DATA BASE EDITS

Cross data base edits are used to cross check similar elements between data bases. The program CROSSDB.__(year) executes the edits using an edit type specified by the user.

Edit types:

For 1974

MS __ ME
SL __ MS

For 1975 - Present

MS __ ME
SL __ MS
VA __ ME
VA __ SL

in each case -- is replaced by the year

Ex. MS79ME

For each edit run, the following need to be unbound from tape.

CROSSDB. __-XQT

DOERCT. __

ES __ DB

MS __ DB

ME __ DB

SL __ DB

VA __ DB

In the morning build this Command File

1. !SWITCH \$
2. !LIMIT TIME:6 USE:1000 GROWTH:50000 LINES:100000
3. !UNBIND,ONLY,LIST ALL DATA BASES NEEDED
 CROSSDB. __-XQT
 DOERCT. __
 DERCT. __
 ES __DB
4. !LIMIT TIME:6 USE:1000 GROWTH:50000 LINES:100000
5. !ALADIN DOERCT. __
6. !CROSSDB. __-XQT
7. Yes
8. Edit type (VA __SL, SL __MS, MS __ME or VA __ME)
9. NO
10. EXIT
11. !ALADIN DERCT. __
12. ALL
13. DROP EC __DB
14. !SWITCH \$

Repeat lines 4-14 for each remaining edit type for that year.

End your command file with these lines.

```
!UNLOAD
!DROP,LIST DOERCT. __, DERCT. __, EC __DB, ES __DB
!DROP,LIST MS __DB, ME __DB, VA __DB, SL __DB, CROSSDB. __-XQT
```

When the command file is completed

```
!JOB,1 filename 'GPS UCS414,PASWRD,LA ____' DEV:1 PHONE:LOCAL
!SHOW #DATE #TIME
!List filename
```

Change LA ____ to LA1978 for Ex.

Keep the listing for each command.

2 days after the Job was scheduled call CSC-8-213-678-0311 ask for control. Give your name, account #, Job ID and Job name. Have the job sent down to SWFC by Federal Express. When your Job arrives from CSC, burst each edit and place in a computer printout binder, label appropriately.

JOB:1 LONED 'GPS UCS414,CHKOUT,LA1977' DEV:1 PHONE:LOCAL
GPS362 LONED-PNC/LIB: 20168 LOCAL

!SHOW #DATE #TIME

#DATE = 09/24/80

#TIME = 08:47:01

!LIST LONED

```
1      !SWITCH $
2      !LIMIT TIME:6 USE:10000 GROWTH:50000 LINES:100000
3      !UNBIND,LIST,ONLY PFOGTP.-UNP/UCS401 DOERCT.77,DERCT.77
4      !UNBIND,LIST,ONLY XEDITS.-UNP/LIB: CROSDR.77-XOT
5      !UNBIND,LIST,ONLY PARENT.6-UNP/UCS401 ES77DE
6      !UNBIND,LIST,ONLY DE1977.6-UNP/UCS401 MS77DE,ME77DE,VA77DE,SL
77DE
7      !LIMIT TIME:6 USE:10000 GROWTH:50000 LINES:100000
8      !ALADIN DOERCT.77
9      !CROSDR.77-XOT
10     YES
11     MS77ME
12     NO
13     EXIT
14     !ALADIN DERCT.77
15     ALL
16     !DPOF EC77DE
17     !ADVANCE
18     !SWITCH $
19     !LIMIT TIME:6 USE:10000 GROWTH:50000 LINES:100000
20     !ALADIN DOERCT.77
21     !CROSDR.77-XOT
22     YES
23     SL77MS
24     NO
25     EXIT
26     !ALADIN DERCT.77
27     ALL
28     !DPOF EC77DE
29     !ADVANCE
30     !SWITCH $
31     !LIMIT TIME:6 USE:10000 GROWTH:50000 LINES:100000
32     !ALADIN DOERCT.77
33     !CROSDR.77-XOT
34     YES
35     VA77ME
36     NO
37     EXIT
38     !ALADIN DERCT.77
39     ALL
40     !DPOF EC77DE
41     !ADVANCE
42     !SWITCH $
43     !LIMIT TIME:6 USE:10000 GROWTH:50000 LINES:100000
44     !ALADIN DOERCT.77
45     !CROSDR.77-XOT
46     YES
47     VA77SL
48     NO
49     EXIT
50     !ALADIN DERCT.77
51     ALL
52     !DPOF EC77DE
53     !SWITCH $
54     !UNLOAD
55     !DPOF,LIST DOERCT.77,DERCT.77,EC77DE,CROSDR.77-XOT,ES77DE
56     !DPOF,LIST ME77DE,MS77DE,VA77DE,SL77DE
```

	1974	1975	1976	1977	1978	1979
MS → ME	9/24 (663)	9/24 (858)	9/27 (1360)	9/26 (700) 10/10/77 (328)	9/29 (1729)	8/5 (1412)
SL → MS	9/21 (486)	9/24 (211)	9/27 (262)	10/4 (1040)	10/2 (1000)	7/5 (592)
VA → ME	NA	9/24 (2533)	9/27 (4495)	10/4 (7900)	10/10 ()	8/25 (5064)
VA → SL	NA	10/1 (2111)	10/10 (634)	10/10 (997)	10/2 (1000)	6/25 (1429)

MANUAL REVIEW COMPLETE

MS → ME	ALL Runs Made Sept/at 1980					
SL → MS						
VA → ME						
VA → SL						

REVISION COMPLETED (READY FOR NEXT RUN)

MS → ME						
SL → MS						
VA → ME	NA					
VA → SL	NA					

1979 Cross-database logical error criteria between Marine Mammal Sightings and Effort data executed during 1980 using the archived Marine Mammal Sightings and Effort database formats (MS79DB and ME79DB).

- ERROR001 THE MS ELEMENTS 'SERIES', 'LEG', 'TIME OF SIGHTING', AND 'POSITION' ARE COMPLETE (I.E. NO SUB ELEMENTS ARE BLANK), AND THERE IS A SERIES OF MAMMAL WATCH EFFORT ASSOCIATED WITH THIS SIGHTING WHERE AT LEAST ONE COMPLETE ME 'POSITION' HAS BEEN RECORDED AND WHERE EACH OCCURRENCE OF 'COURSE' AND 'SPEED' ARE NON BLANK ... WHEN THE ME 'POSITION' IS USED AS A SOURCE POINT AND THE ME 'COURSE'(S) AND 'SPEED'(S) ARE USED TO DEAD RECKON THE VESSEL POSITION AT THE MS 'TIME OF SIGHTING', THIS DEAD RECKONED POSITION IS FOUND TO BE GREATER THAN 002 NAUTICAL MILES DISTANT FROM THE MS 'POSITION'.
- ERROR002 THE MS ELEMENTS 'SERIES', 'LEG', 'TIME OF SIGHTING', AND 'POSITION' ARE COMPLETE (I.E. NO SUB ELEMENTS ARE BLANK), AND THERE IS A SERIES OF MAMMAL WATCH EFFORT ASSOCIATED WITH THIS SIGHTING WHERE AT LEAST ONE COMPLETE ME 'POSITION' HAS BEEN RECORDED AND WHERE EACH OCCURRENCE OF 'COURSE' AND 'SPEED' ARE NON BLANK ... WHEN THE ME 'POSITION' IS USED AS A SOURCE POINT AND THE ME 'COURSE'(S) AND 'SPEED'(S) ARE USED TO DEAD RECKON THE VESSEL POSITION AT THE MS 'TIME OF SIGHTING', THIS DEAD RECKONED POSITION IS FOUND TO BE GREATER THAN 005 NAUTICAL MILES DISTANT FROM THE MS 'POSITION'.
- ERROR003 THE MS ELEMENTS 'SERIES', 'LEG', 'TIME OF SIGHTING', AND 'POSITION' ARE COMPLETE (I.E. NO SUB ELEMENTS ARE BLANK), AND THERE IS A SERIES OF MAMMAL WATCH EFFORT ASSOCIATED WITH THIS SIGHTING WHERE AT LEAST ONE COMPLETE ME 'POSITION' HAS BEEN RECORDED AND WHERE EACH OCCURRENCE OF 'COURSE' AND 'SPEED' ARE NON BLANK ... WHEN THE ME 'POSITION' IS USED AS A SOURCE POINT AND THE ME 'COURSE'(S) AND 'SPEED'(S) ARE USED TO DEAD RECKON THE VESSEL POSITION AT THE MS 'TIME OF SIGHTING', THIS DEAD RECKONED POSITION IS FOUND TO BE GREATER THAN 010 NAUTICAL MILES DISTANT FROM THE MS 'POSITION'.
- ERROR004 THE MS ELEMENTS 'SERIES', 'LEG', 'TIME OF SIGHTING', AND 'POSITION' ARE COMPLETE (I.E. NO SUB ELEMENTS ARE BLANK), AND THERE IS A SERIES OF MAMMAL WATCH EFFORT ASSOCIATED WITH THIS SIGHTING WHERE AT LEAST ONE COMPLETE ME 'POSITION' HAS BEEN RECORDED AND WHERE EACH OCCURRENCE OF 'COURSE' AND 'SPEED' ARE NON BLANK ... WHEN THE ME 'POSITION' IS USED AS A SOURCE POINT AND THE ME 'COURSE'(S) AND 'SPEED'(S) ARE USED TO DEAD RECKON THE VESSEL POSITION AT THE MS 'TIME OF SIGHTING', THIS DEAD RECKONED POSITION IS FOUND TO BE GREATER THAN 020 NAUTICAL MILES DISTANT FROM THE MS 'POSITION'.

Reproduction of computer output obtained from the execution of the 1979 cross database program (MS79ME) for Marine Mammal Sightings and Marine Mammal Effort data (MS79DB.DAT and ME79DB.DAT).

Execution Date on INFONET computer system: August 5, 1980

Program type : MS79ME

Program	Logical Error number	Count of errors
MS79ME	ERROR001	1589
MS79ME	ERROR002	1079
MS79ME	ERROR003	485
MS79ME	ERROR004	267

1944. The following is a list of the names of the persons who were present at the meeting of the Board of Directors of the American Red Cross, held on June 1, 1944, at the Hotel New York, New York. The names are listed in alphabetical order.

SL79MS

- ERROR001 WHEN THE CURRENT PORPOISE SET LOG (I.E. SET LOG ELEMENT 'SET TYPE' IS EQUAL TO '02', '07', OR '08') IS USED TO DEVELOP A KEY FOR THE SIGHTING DATA BASE ... NO SIGHTING RECORD WAS FOUND FOR THE CURRENT PORPOISE SET.
- ERROR002 EITHER THE SET LOG ELEMENT 'N OR S' IS NOT EQUAL TO THE SIGHTING ELEMENT 'N OR S' OR THE SET LOG ELEMENT 'E OR W' IS NOT EQUAL TO THE SIGHTING ELEMENT 'E OR W' ... THIS CONSTITUTES AN ERROR.
- ERROR003 THE SETLOG ELEMENT 'SPC OTHER SP1' IS GREATER THAN ZERO AND IS NOT EQUAL TO ANY ONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS : 'CREW SP1 CODE', 'CREW SP2 CODE', 'CREW SP3 CODE', OR 'CREW SP4 CODE'.
- ERROR004 THE SETLOG ELEMENT 'SPC OTHER SP2' IS GREATER THAN ZERO AND IS NOT EQUAL TO ANY ONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS : 'CREW SP1 CODE', 'CREW SP2 CODE', 'CREW SP3 CODE', OR 'CREW SP4 CODE'.
- ERROR005 THE SUM OF THE SETLOG ELEMENTS 'E1 SPT', 'E2 SPT', AND 'E3 SPT' IS GREATER THAN ZERO AND NONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS ARE EQUAL TO '02', '06', OR '90' : 'CREW SP1 CODE', 'CREW SP2 CODE', 'CREW SP3 CODE', OR 'CREW SP4 CODE'.
- ERROR006 THE SUM OF THE SETLOG ELEMENTS 'E1 SPN', 'E2 SPN', AND 'E3 SPN' IS GREATER THAN ZERO AND NONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS ARE EQUAL TO '03', '10', OR '11' : 'CREW SP1 CODE', 'CREW SP2 CODE', 'CREW SP3 CODE', OR 'CREW SP4 CODE'.
- ERROR007 THE ELEMENTS 'POSITION' FROM BOTH THE SETLOG AND THE SIGHTING RECORD ARE COMPLETE ; WHEN COMPARING THE SETLOG 'POSITION' WITH THE SIGHTING RECORD 'POSITION', GREATER THAN FIFTEEN MINUTES DISTANCE BETWEEN THE TWO HAS BEEN DETECTED (SETS FIFTEEN MINUTES DISTANCE AS A RADIUS FOR THIS ERROR CHECK).
- ERROR008 THE ELEMENTS 'POSITION' FROM BOTH THE SETLOG AND THE SIGHTING RECORD ARE COMPLETE ; WHEN COMPARING THE SETLOG 'POSITION' WITH THE SIGHTING RECORD 'POSITION', GREATER THAN THIRTY MINUTES DISTANCE BETWEEN THE TWO HAS BEEN DETECTED (SETS THIRTY MINUTES DISTANCE AS A RADIUS FOR THIS ERROR CHECK).
- ERROR009 THE ELEMENTS 'POSITION' FROM BOTH THE SETLOG AND THE SIGHTING RECORD ARE COMPLETE ; WHEN COMPARING THE SETLOG 'POSITION' WITH THE SIGHTING RECORD 'POSITION', GREATER THAN FORTY FIVE MINUTES DISTANCE BETWEEN THE TWO HAS BEEN DETECTED (SETS FORTY FIVE MINUTES DISTANCE AS A RADIUS FOR THIS ERROR CHECK).
- ERROR010 THE ELEMENTS 'POSITION' FROM BOTH THE SETLOG AND THE SIGHTING RECORD ARE COMPLETE ; WHEN COMPARING THE SETLOG 'POSITION' WITH THE SIGHTING RECORD 'POSITION', GREATER THAN SIXTY MINUTES (OR ONE DEGREE) DISTANCE BETWEEN THE TWO HAS BEEN DETECTED (SETS SIXTY MINUTES DISTANCE AS A RADIUS FOR THIS ERROR CHECK).
- ERROR011 THE SETLOG ELEMENT 'OBS SPT CD BEF' IS GREATER THAN ZERO AND IS NOT EQUAL TO ANY ONE OF THE FOLLOWING

SIGHTING RECORD ELEMENTS : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR012 THE SETLOG ELEMENT 'OBS EASTERN BEF' IS GREATER THAN ZERO AND NONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS ARE EQUAL TO '10' : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR013 THE SETLOG ELEMENT 'OBS WB BEF' IS GREATER THAN ZERO AND NONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS ARE EQUAL TO '11' : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR014 THE SETLOG ELEMENT 'OBS SPN2 CD BEF' IS EQUAL TO '88' AND NONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS ARE EQUAL TO '88' : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR015 THE SETLOG ELEMENT 'OBS OTHR1 CD BEF' IS GREATER THAN ZERO AND IS NOT EQUAL TO ANY ONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR016 THE SETLOG ELEMENT 'OBS OTHR2 CD BEF' IS GREATER THAN ZERO AND IS NOT EQUAL TO ANY ONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS : 'OBS SP2 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR017 THE SETLOG ELEMENT 'OBS SPT CD CAP' IS GREATER THAN ZERO AND IS NOT EQUAL TO ANY ONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR018 THE SETLOG ELEMENT 'OBS EASTERN CAP' IS GREATER THAN ZERO AND NONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS ARE EQUAL TO '10' : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR019 THE SETLOG ELEMENT 'OBS WB CAP' IS GREATER THAN ZERO AND NONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS IS EQUAL TO '11' : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR020 THE SETLOG ELEMENT 'OBS SPN2 CD CAP' IS EQUAL TO '88' AND NONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS ARE EQUAL TO '88' : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR021 THE SETLOG ELEMENT 'OBS OTHR1 CD CAP' IS GREATER THAN ZERO AND IS NOT EQUAL TO ANY ONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR022 THE SETLOG ELEMENT 'OBS OTHR2 CD CAP' IS GREATER THAN ZERO AND IS NOT EQUAL TO ANY ONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

ERROR023 THE SETLOG ELEMENT 'OTHER SPC KILL' IS GREATER THAN ZERO AND IS NOT EQUAL TO ANY ONE OF THE FOLLOWING SIGHTING RECORD ELEMENTS : 'OBS SP1 CODE', 'OBS SP2 CODE', 'OBS SP3 CODE', OR 'OBS SP4 CODE'.

Reproduction of computer output obtained from the execution of the 1979 cross database program (SL79MS) for Porpoise Set Log and Marine Mammal Sightings data (SL79DB.DAT and MS79DB.DAT).

Execution Date on INFONET computer system: July 5, 1980

Program type : SL79MS

Program	Logical Error number	Count of errors
SL79MS	ERROR001	6
SL79MS	ERROR002	15
SL79MS	ERROR003	9
SL79MS	ERROR004	1
SL79MS	ERROR005	12
SL79MS	ERROR006	3
SL79MS	ERROR007	145
SL79MS	ERROR008	35
SL79MS	ERROR009	25
SL79MS	ERROR010	15
SL79MS	ERROR011	10
SL79MS	ERROR012	4
SL79MS	ERROR013	8
SL79MS	ERROR014	0
SL79MS	ERROR015	94
SL79MS	ERROR016	5
SL79MS	ERROR017	6
SL79MS	ERROR018	5
SL79MS	ERROR019	4
SL79MS	ERROR020	0
SL79MS	ERROR021	6
SL79MS	ERROR022	0
SL79MS	ERROR023	19

1979 Cross-database logical error criteria between Vessel Activity and Marine Mammal Effort data executed during 1980 using the archived Vessel Activity and Marine Mammal Effort database formats (VA79DB and ME79DB).

VA79ME

ERROR001 THE CURRENT VA 'DRIFT RUN CODE' IS EQUAL TO '07'
OR '08' ... AND MAMMAL WATCH EFFORT HAS BEEN
RECORDED BETWEEN THE CURRENT VA 'TIME ACTIVITY'
AND THE FOLLOWING VA 'TIME ACTIVITY'.

ERROR002 THE CURRENT VA 'DRIFT RUN CODE' IS EQUAL TO '04'
AND THE FOLLOWING 'TIME ACTIVITY' IS GREATER THAN
THE CURRENT 'TIME ACTIVITY' PLUS FIVE MINUTES ...
MAMMAL WATCH EFFORT HAS BEEN RECORDED BETWEEN THE
CURRENT 'TIME ACTIVITY' PLUS FIVE MINUTES AND THE
FOLLOWING 'TIME ACTIVITY'.

ERROR003 THE CURRENT VA 'DRIFT RUN CODE' IS EQUAL TO '01'
... AND MAMMAL WATCH EFFORT HAS BEEN RECORDED
BETWEEN THE CURRENT VA 'TIME ACTIVITY' AND THE
FOLLOWING VA 'TIME ACTIVITY'.

ERROR004 THE CURRENT VA 'CHASE OR SET' IS EQUAL TO '1' ...
AND MAMMAL WATCH EFFORT HAS BEEN RECORDED
BETWEEN THE CURRENT VA 'TIME ACTIVITY' AND THE
FOLLOWING VA 'TIME ACTIVITY'.

ERROR005 THE CURRENT VA 'DRIFT RUN CODE' IS EQUAL TO '11'
... AND MAMMAL WATCH EFFORT HAS BEEN RECORDED
BETWEEN THE CURRENT VA 'TIME ACTIVITY' AND THE
FOLLOWING VA 'TIME ACTIVITY'.
THIS ERROR CHECK IDENTIFIES THOSE SERIES OF
MAMMAL WATCH EFFORT WHERE NO CREWMEN WERE
USING BINOCULARS TO LOOK FOR SIGNS OF FISH.
THIS DOES NOT NECESSARILY REPRESENT AN ERROR.

ERROR006 THE CURRENT VA 'SEARCHING' IS EQUAL TO '1' AND
THE CURRENT VA 'NUM BINOCULARS' IS EQUAL TO '0'
... AND MAMMAL WATCH EFFORT HAS BEEN RECORDED
BETWEEN THE CURRENT VA 'TIME ACTIVITY' AND THE
FOLLOWING VA 'TIME ACTIVITY'.
THIS ERROR CHECK IDENTIFIES THOSE SERIES OF
MAMMAL WATCH EFFORT WHERE THE CREWMEN WERE USING
ONLY SMALL HAND HELD BINOCULARS TO LOOK FOR
SIGNS OF FISH. THIS DOES NOT NECESSARILY REPRESENT
AN ERROR.

ERROR007 THE CURRENT VA 'SEARCHING' IS EQUAL TO '1' AND
THE CURRENT VA 'FOG OR RAIN' IS NON BLANK AND
ONE OR MORE LEGS OF MAMMAL WATCH EFFORT HAVE
BEEN RECORDED WHERE ME 'TIME START LEG' IS
GREATER THAN OR EQUAL TO THE CURRENT VA 'TIME
ACTIVITY' AND LESS THAN THE FOLLOWING VA 'TIME
ACTIVITY' ... AND THE ME ELEMENT 'FOG OR RAIN'
FOR ONE OR MORE OF THESE LEGS OF MAMMAL WATCH
EFFORT IS NOT EQUAL TO THE CURRENT VA 'FOG OR
RAIN'.

Reproduction of computer output obtained from the execution of the 1979 cross database program (VA79ME) for Fishing Mode and Marine Mammal Effort data (VA79DB.DAT and ME79DB.DAT).

Execution Date on INFONET computer system: August 5, 1980

Program type : VA79ME

Program	Logical Error number	Count of errors
VA79ME	ERROR001	0
VA79ME	ERROR002	158
VA79ME	ERROR003	40
VA79ME	ERROR004	19
VA79ME	ERROR005	308
VA79ME	ERROR006	269
VA79ME	ERROR007	210

1979 Cross-database logical error criteria between Vessel Activity and Porpoise and Non-Porpoise Set Log data executed during 1980 using the archived Vessel Activity and Porpoise and Non-Porpoise Set Log database formats (VA79DB and SL79DB).

VA79SL

ERROR001 THERE IS NO SETLOG FOR THE KEY DEVELOPED FROM THE VA.
 ERROR002 'DATE' ON THE SETLOG AND VA ARE NOT EQUAL.
 ERROR003 'SET TYPE' ON THE SETLOG AND VA ARE NOT EQUAL.
 ERROR004 IF THE CURRENT SET LOG RECORD IS A PORPOISE SET (I.E.
 SET LOG ELEMENT 'SET TYPE' IS EQUAL TO '02','07',OR
 '08') THE CURRENT SET LOG ELEMENT 'TIME CHASE BEGAN'
 SHOULD BE EQUAL TO THE CURRENT VA ELEMENT 'TIME
 ACTIVITY' ; IF THE CURRENT SET LOG RECORD IS A NON
 PORPOISE SET (I.E. SET LOG ELEMENT 'SET TYPE' IS EQUAL
 TO '01','03','04','05',OR '06') THE CURRENT SET LOG
 ELEMENT 'TIME NET LET GO' SHOULD BE EQUAL TO THE
 CURRENT VA ELEMENT 'TIME ACTIVITY' ... THIS IS NOT
 THE CASE.
 ERROR005 THE CURRENT SET LOG ELEMENT 'TIME END SET' IS NOT
 EQUAL TO THE FOLLOWING VA ELEMENT 'TIME ACTIVITY' ...
 THIS CONSTITUTES AN ERROR.
 ERROR006 THE CURRENT SET LOG ELEMENT 'SET TYPE' IS NOT EQUAL
 TO '01','02','03','04','05','06','07',OR '08' ... THIS
 CONSTITUTES AN ERROR.

Reproduction of computer output obtained from the execution of the 1979 cross database program (VA79SL) for Fishing Mode and Porpoise and Non-Porpoise Set Log data (VA79DB.DAT and SL79DB.DAT).

Execution Date on INFONET computer system: June 25, 1980

Program type : VA79SL

Program	Logical Error number	Count of errors
VA79SL	ERROR001	0
VA79SL	ERROR002	3
VA79SL	ERROR003	15
VA79SL	ERROR004	28
VA79SL	ERROR005	19
VA79SL	ERROR006	0

Results of the error tally counts for 1980 calendar year data obtained from the EC80DB database using the computer program DERCT.80 on March 26, 1981.

ERROR COUNT TALLYS for 1980

The computer programs used to identify range, blank, and logical "errors" during 1979-1981 also updated a database used to count the frequencies with which errors occurred each time the program was executed. This "Error Count Database" provided some insight to the database variables. The PDMG used these frequencies to identify variables which 1) might have range criteria that was too stringent or too loose, 2) required better definitions or more explicit codes, 3) required more emphasis during observer training, and 4) may pose problems during analysis. The error count databases (e.g., EC80DB for 1980 data) are archived at the SWFSC.

Data related to a logical record (e.g., Fishing Mode; Cruise Specification; or Porpoise Set) are identified by the sequential number of the physical record (1,2,...?) which define a logical record, and the 80-column numbers for a variable (e.g. 1.01-1.04 or 14.23-14.35). Logical records can be defined by a single physical record (e.g., Fishing Mode), or multiple physical records (e.g., 3 records for Cruise Specifications and 14 records for Porpoise Sets).

During early 1981, when all of the 1980 NMFS observer data had been edited and archived, the tally totals from the error count database (EC80DB) were retrieved. Totals are presented by data type (e.g., Bridge Log) and data subtype if appropriate (e.g., Non-Porpoise and Porpoise Set Logs) in order of sequence for each of the four error types: 1) B for BLANK errors, 2) C for CHARACTER errors, 3) L for LOGICAL errors, and 4) R for RANGE errors. An explanation of these error types is provided in Oliver and Butler (1991). These totals represent, in some cases, multiple executions of an edit program on a single set data (e.g., Cruise Specifications data from a single cruise). Thus, the error counts are additive if, for example, an "error" was counted during one edit run, not corrected, and counted again during a subsequent edit run. Generally, data are subjected to no more than two or three edit runs before the data is archived. However, not all "errors" can be corrected, and some familiarity and interpretation of the meaning of a particular "error" is required if the tally totals are to be useful.

Error count tallies are identified by the main edit program which detects and tallies the errors. The data and associated edit programs I will address are as follows:

- Captain's Bridge Log (BLEDIT80)
- Cruise Specification (CSEDIT80)
- Porpoise Life History (LHEDIT80)
- Marine Mammal Effort and Sightings (MMEDIT80)
 - Effort
 - Sightings
- Non-Porpoise and Porpoise Set Log (SLEDIT80)
 - Non-Porpoise Set Log
 - Porpoise Set Log and Tally

Fishing Mode (VAEDIT80)

Data subsets were created for the Marine Mammal Effort and Sightings data (E for Effort; S for Sightings) and the Non-Porpoise and Porpoise Set Log data (N for Non-Porpoise Set Log; P for Porpoise Set Log and Tally).

There are four error types possible for each edit program and data subset:

- B - BLANK check error
- C - CHARACTER check error
- L - LOGICAL check error
- R - RANGE check error

The physical card number of the logical record and the columns identifying the variable in error are shown for BLANK, CHARACTER, and RANGE error tallys. The logical error number is given for LOGICAL ERROR tallys.

DATASUBSET AND ERROR TYPE	CARDFIELDID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
B	01 16 17		25.
B	01 18 19		100.
B	01 20 21		127.
B	01 26 27		546.
B	01 30 30		546.
B	01 31 33		556.
B	01 36 36		557.
B	01 40 41		137.
B	01 42 46		316.
B	01 47 51		1078.
B	01 52 56		281.
B	01 57 61		319.
B	01 62 66		417.
B	01 67 71		271.
B	01 72 74		384.
B	01 75 77		346.
B	01 78 80		241.
B	02 14 16		184.
B	02 17 19		179.
B	02 20 22		185.
B	02 24 24		131.
B	02 25 25		126.
B	02 26 26		126.
B	02 27 27		130.
C	01 04 06		3.
C	01 16 17		3.
C	01 38 39		6.
C	01 40 41		9.
C	01 42 46		8.
C	01 47 51		11.
C	01 52 56		10.
C	01 57 61		11.
C	01 62 66		11.
C	01 67 71		7.
C	01 72 74		9.
C	01 75 77		12.
C	01 78 80		12.
C	02 04 06		3.
C	02 14 16		7.
C	02 20 22		1.
C	02 28 32		2.
C	02 38 40		3.
C	02 41 42		6.
L		ERROR003	18.
L		ERROR004	4.
L		ERROR005	6.
L		ERROR006	8.

SUBSET NO R TYPE	CARD CARD	FIELD BEG	ID END	ERROR NUMBER	TALLY
	NUM	COL	COL		
L				ERROR007	15.
L				ERROR008	42.
L				ERROR009	99.
L				ERROR010	313.
L				ERROR011	950.
L				ERROR012	21.
L				ERROR013	30.
L				ERROR014	8.
L				ERROR016	12.
L				ERROR017	35.
L				ERROR018	323.
L				ERROR020	356.
L				ERROR021	86.
L				ERROR022	10.
L				ERROR024	23.
L				ERROR025	90.
L				ERROR026	8.
L				ERROR029	30.
L				ERROR030	339.
L				ERROR032	66.
L				ERROR033	726.
L				ERROR035	79.
L				ERROR036	24.
L				ERROR037	28.
L				ERROR039	23.
L				ERROR041	96.
L				ERROR042	288.
L				ERROR043	29.
L				ERROR044	15.
L				ERROR045	2.
L				ERROR048	10.
L				ERROR050	108.
L				ERROR051	11.
L				ERROR053	4.
L				ERROR054	2.
L				ERROR055	189.
L				ERROR056	2.
L				ERROR063	77.
L				ERROR069	2.
R	01	06	11		307.
R	01	12	12		5.
R	01	13	15		907.
R	01	16	17		2.
R	01	18	19		4.
R	01	20	21		2.
R	01	22	23		95.
R	01	24	25		11.

DATASUBSET AND ERROR TYPE	CARDFIELDID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
R	01 26 27		10.
R	01 28 29		14.
R	01 30 30		6.
R	01 31 33		10.
R	01 34 35		7.
R	01 36 36		48.
R	01 37 37		5.
R	01 38 39		53.
R	01 40 41		5.
R	01 42 46		180.
R	01 52 56		16.
R	01 57 61		32.
R	01 72 74		33.
R	01 75 77		17.
R	02 14 16		41.
R	02 17 19		9.
R	02 23 23		1.
R	02 24 24		5.
R	02 33 37		5.
R	02 38 40		36.
R	02 41 42		36.

UBSET D TYPE	CARD NUM	FIELD BEG COL	ID END COL	ERROR NUMBER	TALLY
B	01	06	09		7.
B	01	10	11		10.
B	01	12	15		10.
B	01	16	16		10.
B	01	29	29		10.
B	01	30	32		1.
B	01	35	36		7.
B	01	37	39		7.
B	01	40	40		6.
B	01	43	44		4.
B	01	45	45		6.
B	01	46	46		6.
B	01	47	47		10.
B	01	48	48		10.
B	01	49	50		15.
B	01	51	53		19.
B	01	54	56		14.
B	01	57	58		10.
B	01	59	61		18.
B	01	62	62		10.
B	01	63	64		27.
B	01	65	67		21.
B	01	68	69		17.
B	01	70	71		17.
B	01	72	74		16.
B	02	06	10		1.
B	02	32	34		10.
B	02	61	69		10.
B	03	06	08		10.
B	03	35	43		10.
C	01	12	15		1.
C	01	37	39		3.
C	03	06	34		2.
L				ERROR001	1.
L				ERROR003	10.
L				ERROR009	11.
L				ERROR010	8.
L				ERROR015	16.
L				ERROR016	1.
L				ERROR018	4.
L				ERROR019	6.
R	01	06	09		4.
R	01	17	18		3.
R	01	23	24		3.
R	01	33	34		10.
X	01	43	44		7.
X	01	45	45		6.

DATASUBSET AND ERROR TYPE	CARD	FIELD	DID	ERROR NUMBER	TALLY
	NUM	BEG COL	END COL		
R	01	46	46		4.
R	01	51	53		1.
R	01	54	56		7.
R	01	57	58		9.
R	01	59	61		5.
R	01	63	64		3.
R	01	65	67		14.
R	01	68	69		2.
R	01	72	74		3.

SUBSET NO OR TYPE	CARD NUM	FIELD BEG COL	DID END COL	ERROR NUMBER	TALLY
B	01	13	14		1.
B	01	15	15		1.
B	01	16	17		1.
B	01	18	19		1.
B	01	20	21		1.
B	01	22	24		1.
B	01	25	26		1.
B	01	27	28		1.
B	01	29	31		1.
B	01	32	33		1.
B	01	34	34		1.
B	01	35	38		1.
B	01	46	46		1.
B	01	50	50		1.
B	01	51	51		1.
B	01	52	52		1.
C	01	25	26		1.
C	01	27	28		1.
C	01	32	33		1.
C	02	30	31		1.
C	02	32	33		1.
L				ERROR006	3.
L				ERROR007	3.
L				ERROR009	3.
L				ERROR011	1.
L				ERROR021	1.
L				ERROR022	2.
R	01	01	04		2.
R	01	08	11		2.
R	01	13	14		2.
R	01	15	15		2.
R	01	16	17		2.
R	01	18	19		2.
R	01	20	21		2.
R	01	22	24		2.
R	01	25	26		2.
R	01	27	28		2.
R	01	29	31		2.
R	01	32	33		2.
R	01	34	34		1.
R	01	35	38		2.
R	01	39	39		2.
R	01	40	40		1.
R	01	41	41		2.
R	01	42	45		2.
R	01	46	46		2.
R	01	47	47		2.

DATA SUBSET AND ERROR TYPE	CARD FIELD ID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
R	01 49 49		1.
R	01 50 50		2.
R	01 51 51		2.
R	01 52 52		2.
R	01 53 53		2.
R	01 54 60		2.
R	01 61 67		2.
R	01 68 74		2.
R	01 75 77		2.
R	01 78 78		1.
R	01 79 79		1.
R	02 01 04		2.
R	02 08 11		2.
R	02 13 15		2.
R	02 16 16		1.
R	02 17 18		2.
R	02 19 20		2.
R	02 21 22		2.
R	02 23 24		2.
R	02 25 26		2.
R	02 27 29		2.
R	02 54 55		2.

ASUBSET AND OR TYPE	CARD NUM	FIELD BEG COL	ID END COL	ERROR NUMBER	TALLY
E B	01	24	25		6.
E B	01	26	27		6.
E B	01	28	30		73.
E B	01	31	33		824.
E B	01	45	45		70.
E B	01	49	49		5.
E C	01	18	20		8.
E C	01	26	27		1.
E C	01	31	33		4.
E C	01	34	35		4.
E C	01	34	44		90.
E C	01	46	47		1.
E L				ERROR047	214.
E L				ERROR048	36.
E L				ERROR049	113.
E L				ERROR050	55.
E L				ERROR051	11.
E L				ERROR052	3.
E L				ERROR053	2.
E L				ERROR054	26.
E L				ERROR055	99.
E L				ERROR056	51.
E L				ERROR057	71.
E L				ERROR058	70.
E L				ERROR059	21.
E L				ERROR060	32.
E L				ERROR061	82.
E L				ERROR062	120.
E L				ERROR063	9.
E L				ERROR065	76.
E L				ERROR066	663.
E L				ERROR067	23.
E L				ERROR068	29.
E L				ERROR069	25.
E L				ERROR070	29.
E L				ERROR071	74.
E L				ERROR072	93.
E L				ERROR073	5.
E L				ERROR074	24.
E L				ERROR075	17.
E L				ERROR082	336.
E L				ERROR084	209.
E L					478.
E R	01	04	05		1.
E R	01	10	11		174.
E R	01	14	15		145.
E R	01	18	20		533.
E R	01	21	21		

Begin Effort

DATA SUBSET AND ERROR TYPE	CARD FIELD ID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
E R	01 23 23		2.
E R	01 24 25		454.
E R	01 26 27		2.
E R	01 28 30		3.
E R	01 31 33		3.
E R	01 34 35		340.
E R	01 36 37		1.
E R	01 38 38		2.
E R	01 39 41		428.
E R	01 42 43		9.
E R	01 44 44		49.
E R	01 45 45		2.
E R	01 46 47		8.
E R	01 48 48		17.
E R	01 49 49		4.
S B	01 18 19		809.
S B	01 20 21		809.
S B	01 22 22		111.
S B	01 24 26		1330.
S B	01 27 29		1355.
S B	01 30 30		967.
S B	01 31 33		1739.
S B	01 46 47		1469.
S B	01 48 49		1469.
S B	01 53 53		1716.
S B	01 54 57		5552.
S B	01 66 69		4395.
S C	01 12 13		1.
S C	01 12 15		4.
S C	01 27 29		4.
S C	01 31 33		13.
S C	01 34 44		54.
S C	01 38 38		1.
S C	01 42 43		1.
S C	01 44 44		5.
S C	01 50 52		2.
S C	01 54 57		1.
S C	01 58 61		2.
S C	01 62 65		2.
S C	01 66 69		1.
S C	01 74 77		3.
S C	02 12 13		1.
S C	02 12 15		4.
S C	02 28 30		2.
S C	02 43 45		1.
S L		ERROR002	25.
S L		ERROR003	10.

END Effort

Begin Sightings

ASUBSET AND OR TYPE	CARD FIELD ID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
S L		ERROR004	4.
S L		ERROR006	7.
S L		ERROR009	1061.
S L		ERROR010	313.
S L		ERROR011	10.
S L		ERROR012	3.
S L		ERROR013	6.
S L		ERROR014	3.
S L		ERROR015	5.
S L		ERROR016	41.
S L		ERROR018	4.
S L		ERROR019	378.
S L		ERROR020	259.
S L		ERROR021	5.
S L		ERROR022	1223.
S L		ERROR023	1.
S L		ERROR024	1239.
S L		ERROR025	18.
S L		ERROR026	17.
S L		ERROR027	9.
S L		ERROR028	2.
S L		ERROR029	21.
S L		ERROR030	300.
S L		ERROR031	328.
S L		ERROR032	16.
S L		ERROR033	12.
S L		ERROR034	3.
S L		ERROR035	33.
S L		ERROR036	14.
S L		ERROR037	3.
S L		ERROR038	1.
S L		ERROR039	15.
S L		ERROR040	3.
S L		ERROR041	2.
S L		ERROR043	18.
S L		ERROR044	6.
S L		ERROR045	4.
S L		ERROR065	47.
S L		ERROR077	162.
S L		ERROR078	17.
S L		ERROR079	52.
S L		ERROR080	145.
S L		ERROR083	94.
S L		ERROR085	69.
S L		ERROR086	3.
R	01 04 05		550.
R	01 10 11		644.

DATASUBSET AND ERROR TYPE	CARDFIELDID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
S R	01 18 19		190.
S R	01 22 22		2.
S R	01 23 23		1.
S R	01 24 26		19.
S R	01 27 29		1229.
S R	01 30 30		7.
S R	01 31 33		100.
S R	01 34 35		418.
S R	01 36 37		12.
S R	01 38 38		9.
S R	01 39 41		375.
S R	01 42 43		16.
S R	01 44 44		54.
S R	01 46 47		143.
S R	01 48 49		5.
S R	01 53 53		1.
S R	01 54 57		104.
S R	01 58 61		3.
S R	01 62 65		42.
S R	01 66 69		87.
S R	01 70 73		69.
S R	01 74 77		63.
S R	02 04 05		550.
S R	02 10 11		644.
S R	02 18 20		7.
S R	02 23 25		2.
S R	02 28 30		5.
S R	02 33 35		2.
S R	02 38 40		3.
S R	02 48 50		1.
S R	02 58 58		1.

SUBSET AND ROR TYPE		CARD NUM	FIELD BEG COL	ID END COL	ERROR NUMBER	TALLY
N	B	01	15	16		89.
N	B	01	17	18		89.
N	B	01	19	19		89.
N	B	01	20	22		89.
N	B	01	23	24		90.
N	B	01	25	25		89.
N	B	01	28	28		99.
N	B	01	40	41		71.
N	B	01	45	46		93.
N	B	01	47	48		38.
N	B	01	49	50		38.
N	B	01	51	52		79.
N	B	01	53	54		79.
N	B	01	55	55		89.
N	B	01	56	56		66.
N	B	02	09	09		97.
N	B	02	18	19		38.
N	B	02	20	21		38.
N	B	02	22	24		62.
N	B	02	25	27		62.
N	B	02	28	30		62.
N	B	02	33	33		69.
N	B	02	34	34		65.
N	B	02	35	35		80.
N	C	01	19	19		2.
N	C	01	25	25		4.
N	C	01	29	30		1.
N	C	02	28	30		1.
N	L				ERROR004	85.
N	L				ERROR006	138.
N	L				ERROR007	5.
N	L				ERROR008	278.
N	L				ERROR010	343.
N	L				ERROR012	5.
N	L				ERROR013	3.
N	L				ERROR014	3.
N	L				ERROR015	7.
N	L				ERROR016	4.
N	L				ERROR017	1.
N	L				ERROR018	10.
N	L				ERROR189	2.
N	R	01	09	10		83.
N	R	01	15	16		249.
N	R	01	20	22		658.
N	R	01	23	24		1.
N	R	01	25	25		2.
N	R	01	33	35		18.

Begin Non-Purpose
set Log

DATASUBSET AND ERROR TYPE		CARDFIELDID CARD BEG END NUM COL COL			ERROR NUMBER	TALLY
N	R	01	36	39		5.
N	R	01	45	46		8.
N	R	01	47	48		11.
N	R	01	49	50		1.
N	R	01	51	52		2.
N	R	01	57	58		28.
N	R	02	10	11		41.
N	R	02	16	17		1.
N	R	02	18	19		12.
N	R	02	20	21		1.
N	R	02	22	24		21.
N	R	02	25	27		128.
N	R	02	28	30		85.
N	R	02	31	32		4.
P	B	01	15	16		2.
P	B	01	17	18		2.
P	B	01	20	22		2.
P	B	01	23	24		2.
P	B	01	25	25		1.
P	B	01	28	29		4.
P	B	01	30	31		4.
P	B	01	32	32		11.
P	B	01	33	36		273.
P	B	02	25	28		163.
P	B	02	29	32		163.
P	B	02	33	36		163.
P	B	02	37	39		168.
P	B	02	40	42		168.
P	B	02	43	45		168.
P	B	02	46	48		168.
P	B	02	49	51		168.
P	B	02	52	54		168.
P	B	02	67	67		34.
P	B	03	09	12		71.
P	B	03	13	16		73.
P	B	03	17	20		73.
P	B	03	21	23		140.
P	B	03	24	26		139.
P	B	03	27	29		139.
P	B	03	30	32		139.
P	B	03	33	35		139.
P	B	03	36	38		139.
P	B	03	54	55		12.
P	B	03	56	57		12.
P	B	03	58	58		56.
P	B	03	65	68		328.
P	B	04	45	48		169.

END Non-Porpoise
Set Log

Begin Porpoise Set Log
and Tally

ASUBSET AND OR TYPE	CARDFIELDID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
P B	04 49 52		171.
P B	04 53 56		171.
P B	04 57 59		251.
P B	04 60 62		253.
P B	04 63 65		253.
P B	04 66 68		253.
P B	04 69 71		253.
P B	04 72 74		253.
P B	05 11 11		66.
P B	05 13 13		2.
P B	05 14 14		14.
P B	05 15 15		2.
P B	05 16 16		2.
P B	05 27 27		55.
P B	05 31 31		2.
P B	06 09 09		7.
P B	06 14 14		9.
P B	06 19 19		5.
P B	06 24 24		6.
P B	06 29 30		17.
P B	06 31 31		7.
P B	06 35 35		8.
P B	06 39 39		7.
P B	06 52 52		9.
P B	06 64 65		5.
P B	06 66 67		5.
P B	06 68 68		18.
P B	06 69 72		5.
P B	06 73 74		5.
P B	06 75 77		5.
P B	06 78 80		4.
P B	07 09 11		1.
P B	07 61 61		2.
P B	07 62 62		2.
P B	07 66 66		3.
P B	07 67 67		5.
P B	07 72 72		1.
P C	01 58 60		3.
P C	01 64 66		2.
P C	02 49 51		1.
P C	02 52 54		1.
P C	02 59 60		2.
P C	03 13 16		1.
P C	03 39 40		3.
P C	03 41 42		1.
P C	03 45 46		1.
P C	03 47 48		1.

DATASUBSET AND ERROR TYPE	CARDFIELDID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
P C	03 52 53		1.
P C	04 24 26		2.
P C	04 77 78		2.
P C	05 28 30		2.
P C	05 45 48		1.
P C	05 58 60		2.
P C	05 74 76		1.
P C	06 74 76		1.
P C	07 20 22		1.
P C	07 56 58		4.
P C	07 63 65		1.
P C	08 09 11		1.
P C	09 75 77		1.
P C	09 78 80		1.
P L		ERROR003	7.
P L		ERROR004	35.
P L		ERROR022	7.
P L		ERROR025	4.
P L		ERROR026	47.
P L		ERROR028	5.
P L		ERROR029	16.
P L		ERROR030	1.
P L		ERROR031	4.
P L		ERROR032	10.
P L		ERROR034	1.
P L		ERROR035	9.
P L		ERROR036	3.
P L		ERROR037	3.
P L		ERROR038	1.
P L		ERROR039	12.
P L		ERROR040	47.
P L		ERROR041	18.
P L		ERROR042	9.
P L		ERROR043	3.
P L		ERROR044	1.
P L		ERROR045	3.
P L		ERROR046	6.
P L		ERROR047	25.
P L		ERROR048	1.
P L		ERROR050	7.
P L		ERROR051	53.
P L		ERROR052	82.
P L		ERROR053	137.
P L		ERROR054	130.
P L		ERROR055	13.
P L		ERROR056	5.
P L		ERROR059	2.

ASUBSET AND OR TYPE	CARDFIELDID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
P L		ERROR060	21.
P L		ERROR061	2.
P L		ERROR062	1.
P L		ERROR063	2.
P L		ERROR064	5.
P L		ERROR065	1.
P L		ERROR066	4.
P L		ERROR067	23.
P L		ERROR068	82.
P L		ERROR070	1.
P L		ERROR071	34.
P L		ERROR072	1.
P L		ERROR073	5.
P L		ERROR074	21.
P L		ERROR075	1.
P L		ERROR076	6.
P L		ERROR077	5.
P L		ERROR078	2.
P L		ERROR080	2.
P L		ERROR081	90.
P L		ERROR082	179.
P L		ERROR083	110.
P L		ERROR084	20.
P L		ERROR085	2.
P L		ERROR088	1.
P L		ERROR089	20.
P L		ERROR092	7.
P L		ERROR093	25.
P L		ERROR095	4.
P L		ERROR096	1.
P L		ERROR097	1.
P L		ERROR099	372.
P L		ERROR100	5.
P L		ERROR101	4.
P L		ERROR102	7.
P L		ERROR103	61.
P L		ERROR104	111.
P L		ERROR105	145.
P L		ERROR106	29.
P L		ERROR107	13.
P L		ERROR108	11.
P L		ERROR109	13.
P L		ERROR110	4.
P L		ERROR111	2.
P L		ERROR112	42.
P L		ERROR113	8.
P L		ERROR114	178.

DATASUBSET AND ERROR TYPE	CARDFIELDID CARD BEG END NUM COL COL	ERROR NUMBER	TALLY
P L		ERROR115	5.
P L		ERROR118	6.
P L		ERROR119	14.
P L		ERROR120	34.
P L		ERROR121	35.
P L		ERROR122	58.
P L		ERROR123	33.
P L		ERROR124	21.
P L		ERROR126	26.
P L		ERROR128	20.
P L		ERROR129	4.
P L		ERROR130	4.
P L		ERROR132	8.
P L		ERROR133	2.
P L		ERROR137	2.
P L		ERROR138	24.
P L		ERROR139	20.
P L		ERROR140	11.
P L		ERROR141	1.
P L		ERROR142	11.
P L		ERROR143	42.
P L		ERROR144	13.
P L		ERROR145	5.
P L		ERROR146	33.
P L		ERROR147	8.
P L		ERROR148	5.
P L		ERROR149	11.
P L		ERROR150	7.
P L		ERROR151	5.
P L		ERROR152	7.
P L		ERROR153	26.
P L		ERROR154	10.
P L		ERROR155	13.
P L		ERROR157	14.
P L		ERROR158	14.
P L		ERROR159	13.
P L		ERROR160	4.
P L		ERROR161	29.
P L		ERROR162	50.
P L		ERROR163	18.
P L		ERROR164	16.
P L		ERROR165	8.
P L		ERROR166	19.
P L		ERROR167	3.
P L		ERROR168	20.
P L		ERROR169	5.
P L		ERROR170	9.

SUBSET ND R TYPE	CARD NUM	FIELD COL	DID BEG END COL	ERROR NUMBER	TALLY
L				ERROR172	10.
L				ERROR173	3.
L				ERROR174	6.
L				ERROR175	4.
L				ERROR176	7.
L				ERROR177	3.
L				ERROR178	25.
L				ERROR179	16.
L				ERROR180	17.
L				ERROR181	6.
L				ERROR182	3.
L				ERROR183	3.
L				ERROR184	3.
L				ERROR185	4.
L				ERROR188	3.
L				ERROR190	17.
L				ERROR191	41.
R	01	01	03		60.
R	01	09	10		64.
R	01	15	16		4.
R	01	19	19		1.
R	01	20	22		55.
R	01	23	24		4.
R	01	25	25		3.
R	01	32	32		14.
R	01	33	36		27.
R	01	49	50		4.
R	01	51	54		10.
R	01	64	66		4.
R	02	01	03		60.
R	02	09	12		5.
R	02	25	28		5.
R	02	33	36		6.
R	02	49	51		1.
R	02	55	56		1.
R	02	57	58		19.
R	02	67	67		2.
R	02	68	71		2.
R	02	72	73		42.
R	03	01	03		60.
R	03	09	12		82.
R	03	13	16		73.
R	03	17	20		97.
R	03	24	26		1.
R	03	36	38		1.
R	03	39	40		3.
R	03	41	42		18.

DATASUBSET AND ERROR TYPE		CARD NUM	FIELD BEG COL	DID END COL	ERROR NUMBER	TALLY
P	R	03	43	44		2.
P	R	03	45	46		1.
P	R	03	49	51		1.
P	R	03	52	53		1.
P	R	03	54	55		1.
P	R	03	56	57		2.
P	R	03	59	62		2.
P	R	03	65	68		13.
P	R	04	01	03		60.
P	R	04	09	10		2.
P	R	04	11	14		6.
P	R	04	15	17		1.
P	R	04	24	26		3.
P	R	04	27	28		3.
P	R	04	29	32		6.
P	R	04	45	48		87.
P	R	04	49	52		81.
P	R	04	53	56		95.
P	R	04	57	59		3.
P	R	04	63	65		1.
P	R	04	77	78		18.
P	R	05	01	03		60.
P	R	05	11	11		637.
P	R	05	18	19		3.
P	R	05	24	26		9.
P	R	05	27	27		2.
P	R	05	28	30		13.
P	R	05	32	33		31.
P	R	05	36	36		66.
P	R	05	37	37		1.
P	R	05	38	38		3.
P	R	05	40	40		1.
P	R	05	41	42		48.
P	R	05	45	48		45.
P	R	05	49	52		33.
P	R	05	53	56		60.
P	R	05	57	57		2.
P	R	05	58	60		27.
P	R	05	63	63		1.
P	R	05	64	65		212.
P	R	05	66	66		1.
P	R	05	67	67		158.
P	R	05	70	70		3.
P	R	05	71	73		24.
P	R	05	74	76		19.
P	R	06	01	03		60.
P	R	06	10	10		14.

SUBSET AND ERROR TYPE		CARD NUM	FIELD BEG COL	ID END COL	ERROR NUMBER	TALLY
P	R	06	11	13		1.
P	R	06	20	20		23.
P	R	06	21	23		12.
P	R	06	26	28		8.
P	R	06	29	30		10.
P	R	06	36	38		2.
P	R	06	40	41		20.
P	R	06	42	43		1.
P	R	06	44	46		9.
P	R	06	47	47		1.
P	R	06	48	48		11.
P	R	06	49	51		8.
P	R	06	53	54		24.
P	R	06	55	56		1.
P	R	06	60	61		10.
P	R	06	62	63		2.
P	R	06	64	65		10.
P	R	06	68	68		2.
P	R	06	69	72		24.
P	R	06	73	74		9.
P	R	06	78	80		2.
P	R	07	01	03		60.
P	R	07	09	11		3.
P	R	07	12	13		13.
P	R	07	59	60		1.
P	R	07	61	61		1.
P	R	07	63	65		13.
P	R	07	67	67		5.
P	R	07	72	72		4.
P	R	07	73	74		1.
P	R	08	01	03		60.
P	R	08	24	26		2.
P	R	08	33	35		2.
P	R	08	51	53		2.
P	R	08	54	56		29.
P	R	08	66	68		4.
P	R	08	69	71		4.
P	R	08	72	74		22.
P	R	09	01	03		60.
P	R	09	09	11		4.
P	R	09	18	20		4.
P	R	09	30	32		8.
P	R	09	78	80		28.
P	R	10	01	03		60.
P	R	10	24	26		6.
P	R	10	54	56		32.
P	R	11	01	03		60.

DATASUBSET AND ERROR TYPE		CARDFIELDID CARD BEG END NUM COL COL			ERROR NUMBER	TALLY
P	R	11	27	29		1.
P	R	11	30	32		8.
P	R	11	48	50		4.
P	R	11	78	80		1.
P	R	12	01	03		60.
P	R	13	01	03		60.
P	R	14	01	03		60.
P	R	14	48	50		1.
P	R	14	59	60		1.
P	R	14	63	64		6.

TASUBSET AND ROR TYPE	CARD NUM	FIELD BEG COL	ID END COL	ERROR NUMBER	TALLY
B	01	04	06		1.
B	01	17	17		8.
B	01	27	27		19.
B	01	33	33		23.
C	01	18	20		9.
C	01	22	24		7.
C	01	28	30		11.
C	01	34	35		4.
L				ERROR001	8.
L				ERROR002	12.
L				ERROR003	15.
L				ERROR004	29.
L				ERROR005	4.
L				ERROR006	2.
L				ERROR007	22.
L				ERROR008	9.
L				ERROR010	15.
L				ERROR011	5.
L				ERROR012	488.
L				ERROR013	103.
L				ERROR016	695.
L				ERROR017	37.
L				ERROR018	21.
L				ERROR019	6.
L				ERROR020	20.
L				ERROR021	18.
L				ERROR022	17.
L				ERROR023	11.
L				ERROR024	26.
R	01	01	03		2.
R	01	04	06		2.
R	01	07	08		1536.
R	01	09	10		2.
R	01	11	12		2.
R	01	13	14		2.
R	01	15	16		2.
R	01	17	17		6.
R	01	18	20		200.
R	01	21	21		9.
R	01	22	24		251.
R	01	25	25		439.
R	01	26	26		3.
R	01	27	27		2.
R	01	28	30		3.
R	01	31	32		3.
R	01	33	33		9.
R	01	34	35		4.

